

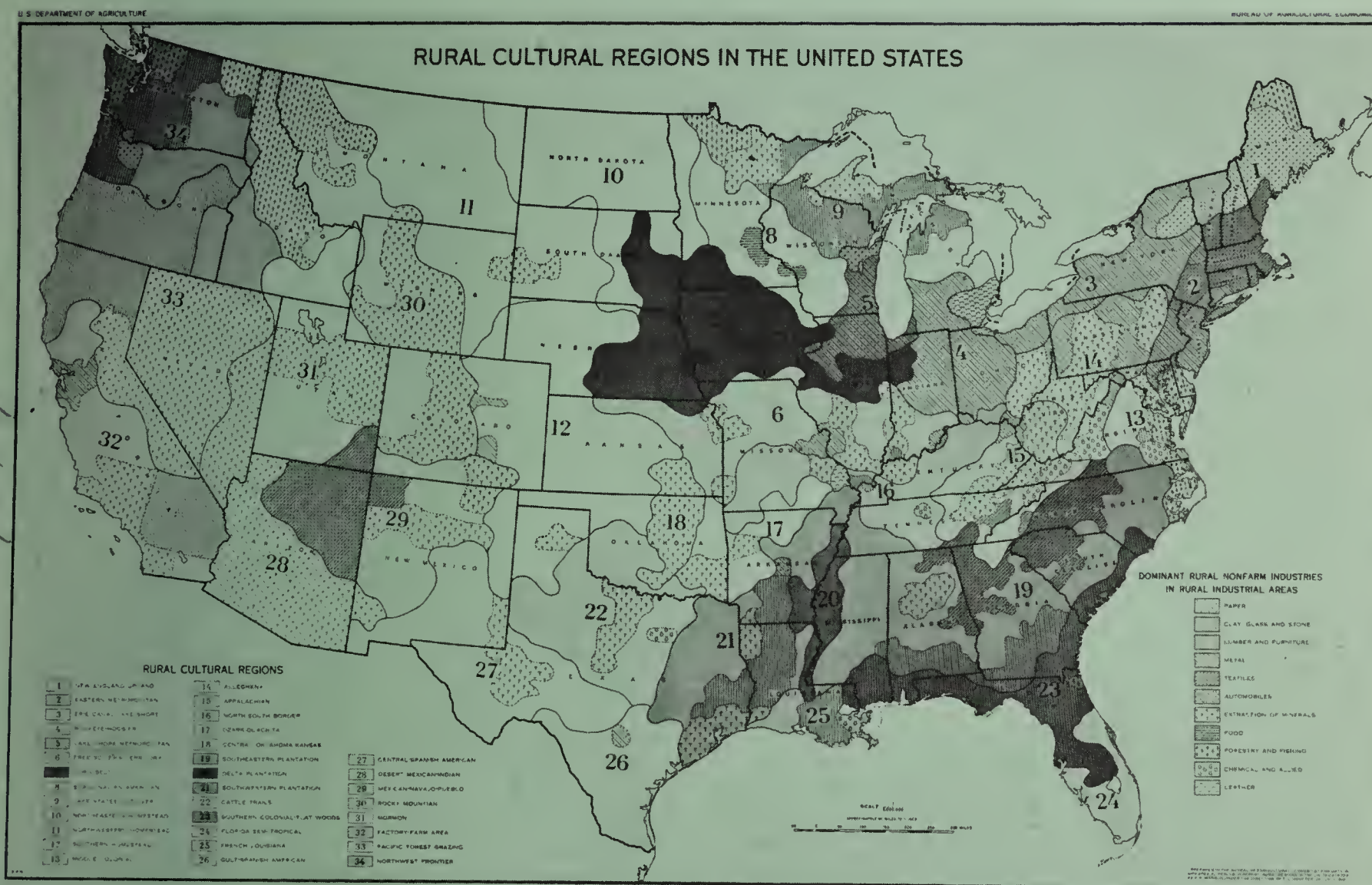
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Cartographic Records of the Bureau of Agricultural Economics



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Cartographic Records of the Bureau of Agricultural Economics

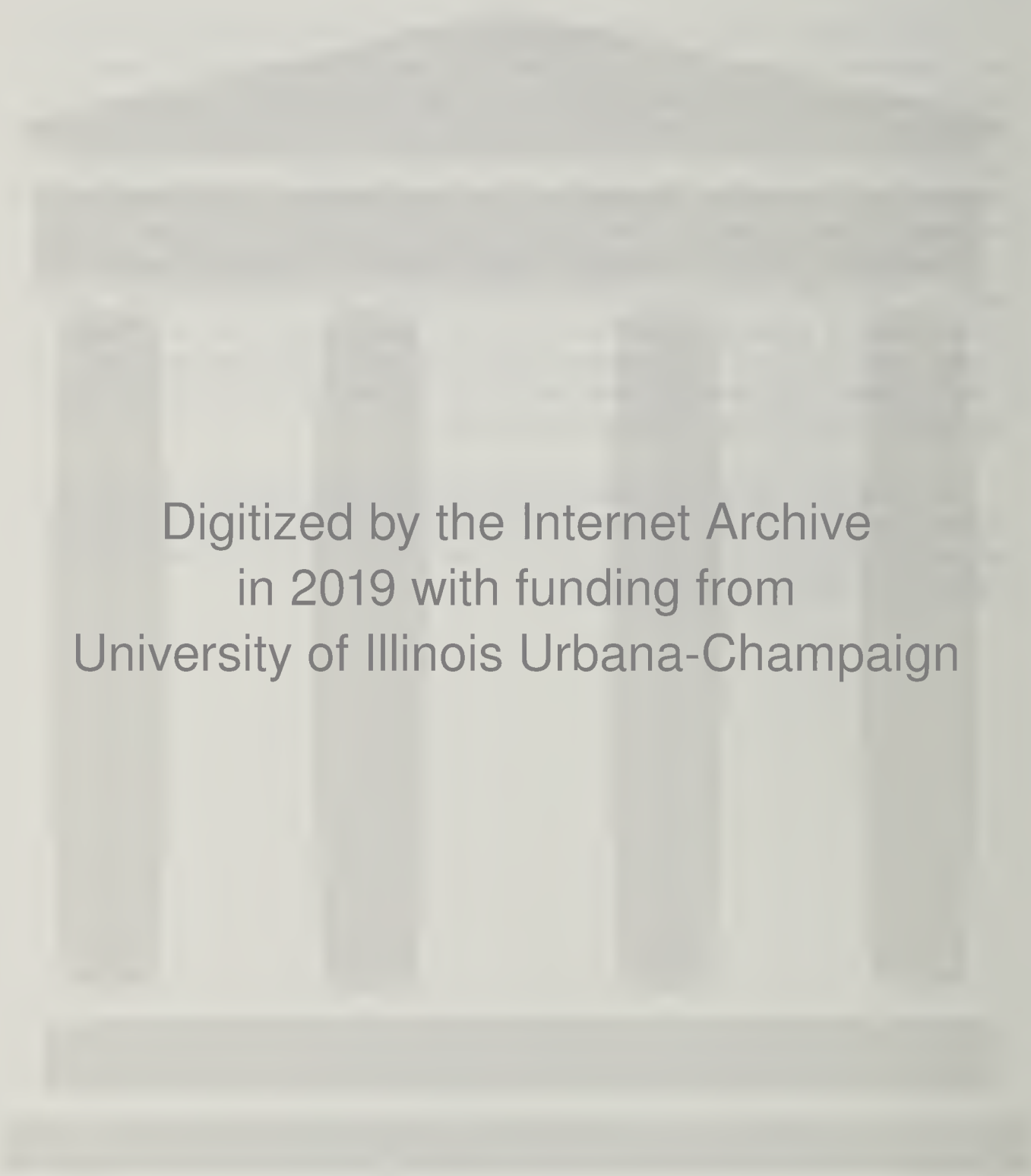
Compiled by William J. Heynen

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Foreword

The General Services Administration, through the National Archives and Records Service, is responsible for administering the permanent noncurrent records of the Federal Government. These archival holdings, now amounting to more than 900,000 cubic feet, date from the days of the First Continental Congress and consist of the basic records of the legislative, judicial, and executive branches of our Government. The Presidential libraries of Herbert Hoover, Franklin D. Roosevelt, Harry S. Truman, Dwight D. Eisenhower, John F. Kennedy, and Lyndon B. Johnson contain the papers of those Presidents and many of their associates in office. While many of the archival holdings document events of great moment in our Nation's history, most of them are preserved because of their continuing practical use in the ordinary processes of government, for the protection of private rights, and for the research use of scholars and students.

To facilitate the use of the records and to describe their nature and content, archivists prepare various kinds of finding aids. The present work is one such publication. We believe that it will prove valuable to anyone who wishes to use the records it describes.



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Preface

Special lists are published by the National Archives as part of its records description program. The special list describes in detail the contents of certain important records series, that is, units of records of the same form or that deal with the same subject or activity or that are arranged serially. Its form and style are not fixed but vary according to the nature of the records to which it relates. Its distinguishing characteristic is that it goes beyond the general description contained in a record group registration statement, a preliminary inventory, or an inventory, and describes records in terms of individual record items.

In addition to lists and other finding aids that relate to particular record groups, the National Archives publishes some that give an overall picture of materials in its custody. A comprehensive *Guide to the Records in the National Archives* (1948) and a brief guide, *Your Government's Records in the National Archives* (revised 1950), have been issued. A guide devoted to one geographical area—*Guide to Materials on Latin America in the National Archives* (1961)—has been published. Forty-five *Reference Information Papers*, which analyze records in the National Archives on such subjects as transportation, small business, and the Middle East, have so far been issued. Records of the Civil War are described in *Guide to Federal Archives Relating to the Civil War* (1962), *Guide to the Archives of the Government of the Confederate States of America* (1968), and *Civil War Maps in the National Archives* (1964); those of World War I in *Handbook of Federal World War Agencies and Their Records, 1917-1921* (1943); and those of World War II in the two-volume guide, *Federal Records of World War II* (1950-51). Genealogical records are described in *Guide to Genealogical Records in the National Archives* (1964). Among the holdings of the National Archives are large quantities of audiovisual materials received from all sources: Government, private, and commercial. The *Guide to the Ford Film Collection in the National Archives* (1970) describes one of the largest private gift collections. Many bodies of records of high research value have been microfilmed by the National Archives as a form of publication. Positive prints of these microfilm publications, many of which are described in the *List of National Archives Microfilm Publications* (1968), are available for purchase.

Contents

	Page
Introduction	1
Records of the Office of Farm Management and Farm Economics	5
General records	5
Division of Agricultural History and Geography	6
Records of the central office of the BAE	13
General records	13
Division of Farm Population and Rural Life	14
Division of Agricultural Finance	15
Division of Crop and Livestock Estimates	16
Division of Marketing and Transportation Research	16
Division of Farm Management and Costs	16
Tobacco Division	18
Division of Statistical and Historical Research	18
Division of State and Local Planning	19
Division of Land Economics	20
General records	21
Land Classification Section	24
Land Utilization Section	27
General records	27
Records of Oliver E. Baker	28
Records of Francis J. Marschner	31
Public Finance Section	37
Water Utilization Section	37
Flood Control Section	39
Land Utilization Program	39
Records of the regional offices of the BAE	41
Atlanta office (Region 5)	41
Berkeley office (Region 7)	41
General records	42
Division of Farm Population and Rural Life	44
Division of Farm Management and Costs	46
Division of Land Economics	47
General records	47
Water Utilization Section	53
Flood Control Section	53

	Page
Appendixes:	
I. Maps compiled by State and county planning committees (entry 72)	55
II. Miscellaneous county maps prepared by county planning committees (entry 73)	57
III. Maps of Eastern and Southern States prepared by State land planning consultants (entry 99)	58
IV. Maps in the numbered map collection of the Land Classification Section (entry 109)	58
V. Geological and miscellaneous reference maps published by State agencies (entry 119)	62
VI. Crop and livestock maps, 1919-35 (entry 121)	63
VII. Maps used in the preparation of <i>Land Use and Its Patterns in the United States</i> (entry 169)	64
VIII. Manuscript and photoprocessed maps relating to water facilities plans (entry 182)	65
IX. Published maps relating to water facilities plans (entry 183)	66
X. Maps of the Western States prepared by State land planning consultants (entry 241)	69
XI. Maps relating to water facilities plans in Arizona, California, and Utah (entry 291)	71
XII. Maps relating to flood control examinations in Arizona, California, Idaho, Nevada, and Utah (entry 293)	72
Indexes:	
I. Subject-name index	73
II. Geographic index	87

Introduction

The records described in this list are the map files of the Bureau of Agricultural Economics (BAE) in the Cartographic Archives Division of the National Archives. They consist of 4,361 items, including maps, atlases, and graphs, and are part of the Records of the Bureau of Agricultural Economics, Record Group 83. The textual records of the BAE have been described in Vivian Wiser, comp., *Preliminary Inventory of the Records of the Bureau of Agricultural Economics*, PI 104 (1958).

The BAE was established under the Department of Agriculture on July 1, 1922, by a merger of the Bureau of Markets and Crop Estimates and the Office of Farm Management and Farm Economics. Before 1922 the function of estimating crop acreage and yields had been centered in the Bureau of Crop Estimates, established in 1914. An Office of Markets, established in 1913, had been assigned studies of methods, costs, and other agricultural marketing problems. In 1921 these two units were combined to form the Bureau of Markets and Crop Estimates, one of the organizations from which the BAE was formed.

The Office of Farm Management and Farm Economics, the other predecessor agency of the BAE, was established in 1905 within the Bureau of Plant Industry as the Office of Farm Management. In 1915 it became a separate office under the Secretary of Agriculture, and in 1919 it was renamed the Office of Farm Management and Farm Economics. At first this Office studied farm practices, but in about 1910 it began to emphasize agricultural economics, eventually encompassing the study of agricultural geography.

In 1921 and 1922 the Bureau of Markets and Crop Estimates and the Office of Farm Management and Farm Economics were gradually consolidated to form the BAE under the authority of the Agricultural Appropriations Act for fiscal year 1923 (42 Stat. 532). For most of the next three decades the BAE served as the central statistical and economic research agency of the Department of Agriculture, collecting, analyzing, and publishing a wide variety of data about agriculture and rural conditions in the United States and the rest of the world.

Initially the BAE was organized into divisions which for the most part continued the work done in the predecessor agencies. Units concerned with farm production were the Divisions of Farm Management, Cost of Production, and Crop and Livestock Estimates. Those concerned with marketing were the Divisions of Cotton; Livestock, Meats, and Wool; Grain; Fruits and Vegetables; Hay, Feed, and Seed; Dairy and Poultry Products; Warehousing; City Markets; and Cost of Marketing. Other units included the Divisions of Agricultural Finance, Land Economics, Statistical and Historical Research, Farm Population and Rural Life, Agricultural Cooperation, and Information.

Between 1922 and 1938 the BAE underwent several administrative changes until by 1938 its work had expanded to include the fields of marketing regulation, the administration of local projects, and other service activities. These changes involved the merger of the Division of Farm Management and the Division of Cost of Production to form the Division of Farm Management and Costs in 1924, the establishment of the Division of Foreign Agricultural Service in 1930, and the establishment of the Tobacco Section and the Division of Marketing Research in 1934 and the Division of Transportation in 1938. In addition, the land utilization program and staff of the

Department of Agriculture's Resettlement Administration were transferred to the BAE in 1937, and three new divisions and a regional organization were created within the BAE to administer the land utilization program.

In 1938-39 the BAE, while retaining some of its research responsibilities, was reconstituted as the general planning agency for the Secretary and Department as a whole. By Secretary of Agriculture's Memorandums 782, 783, and 785 of October 6, 1938, the work of the BAE was simplified and consolidated, and unrelated functions were transferred to other units of the Department. Work in agricultural statistical estimates and marketing research and regulation was transferred to the new Agricultural Marketing Service, and the administration of the land utilization program was assumed by the Soil Conservation Service. Conversely, the functions of the Program Planning Division of the Agricultural Adjustment Administration were transferred to the BAE's new Division of State and Local Planning, and three new divisions—the Divisions of Program Surveys, Program Study and Discussion, and Program Development and Coordination were created to carry out central program planning for the Department.

During the early 1940's interest in perpetuating the BAE as the central planning agency waned, and its role as the chief source of agricultural and economic information was reemphasized. Planning functions were gradually transferred to other units or abolished. In 1942 all State and local planning in the BAE was discontinued. Responsibility for collecting crop and livestock statistics was restored, and the BAE again served as the primary agency in the Department of Agriculture for collecting and disseminating agricultural statistics and economic data. In 1945 the program planning work was transferred from the BAE to the Office of the Secretary.

On November 2, 1953, by Secretary's Memorandum 1320, Supplement 4, the BAE was abolished. The work of the Divisions of Farm Management and Costs, Land Economics, and Agricultural Finance, and the farm labor work of the Division of Farm Population and Rural Life were transferred to the Agricultural Research Service; the remainder of the BAE's functions were transferred to the Agricultural Marketing Service. In 1961 work in agricultural economics was centralized in the Economic Research Service.

The drafting and reproduction of maps and charts at the BAE was essentially the job of the Graphics Section. At its establishment in 1922 the BAE acquired the cartographic draftsmen of the Office of Farm Management and Farm Economics. In that year the Graphics Section was assigned to the Division of Statistical and Historical Research. In the following years the section was administered by the Office of the Business Manager, the Division of Statistical and Historical Research, and the Division of Business Administration. By 1941 the Graphics Section had become part of the Division of Economic Information, which earlier had assumed responsibility for photographic reproduction and publication of maps and charts.

From 1922 the Graphics Section was successively headed by R. G. Hainsworth, the former head draftsman of the Office of Farm Management and Farm Economics, G. C. Haas, and T. D. Johnson. From about 1925 until the 1940's Hainsworth again supervised the section. He personally drafted a number of maps during the 1920's and 1930's, and in 1926 he authored a bulletin entitled "Graphic Methods." Hainsworth left the BAE during World War II to become cartographer and chief economic geographer for the Office of Foreign Agricultural Relations, and in the early 1950's Robert Turnure headed the section.

During the years of the BAE's existence the Graphics Section gradually became involved in cartographic work for other agencies under the Department of Agriculture. Its increasing responsibility for map production can be measured by its growth: 11 draftsmen in 1922, 15 in 1925, 18 in 1927, and by 1939, as a consequence of the BAE's expanded programs in land use planning, the number had increased to 30.

Individuals and groups within the separate divisions compiled many of the maps and did some of the drafting. In the Division of Land Economics, for example, Francis J. Marschner was a skilled and prolific cartographic draftsman, geographer Oliver E. Baker initiated numerous mapping projects, and Carleton P. Barnes prepared several maps while a member of the Division during the early 1930's. In the Division of State and Local Planning, a Service Unit had the task of transferring cartographic information from county to national maps. The Division of Farm Management mapped local and national type-of-farming areas, and a cartographic section was attached to the land utilization program for the short time it was under the BAE's administration (1937-38). In addition, cartographers located in the regional offices of the BAE prepared a number of regional maps and cooperated in mapping programs of the central office.

The maps described in this list represent only a part of the cartographic work of the BAE over its 31-year history. Very few maps from the 1945-53 period are among the BAE files of the Cartographic Archives Division. In addition, a number of maps the BAE compiled or accumulated are interfiled among its textual records and have not been described in this list.

Included among the cartographic records of the BAE are maps from one of its predecessor agencies, the Office of Farm Management and Farm Economics. These records, created before the BAE was established in 1922, are arranged and described as a separate unit. No cartographic records created by the Bureau of Markets and Crop Estimates have been found.

Related cartographic records can be found in several other record groups in the National Archives. Maps relating to postwar planning committees and the water facilities and flood control examination program and published maps and atlases prepared partially by BAE personnel are in Records of the Office of the Secretary of Agriculture, Record Group 16. Most of the maps pertaining to the land utilization program have been centralized in the Records of the Soil Conservation Service, Record Group 114. Other related cartographic records are among the following: Records of the Bureau of Plant Industry, Soils, and Agricultural Engineering, Record Group 54; Records of the Forest Service, Record Group 95; Records of the Farmers Home Administration, Record Group 96 (formerly the Resettlement Administration and the Farm Security Administration); Records of the Agricultural Stabilization and Conservation Service, Record Group 145 (formerly the Agricultural Adjustment Administration or Agency); Records of the Office of Experiment Stations, Record Group 164; Records of the Foreign Agricultural Service, Record Group 166; and Records of the National Resources Planning Board, Record Group 187.

The descriptive entries in this list are arranged by organizational units. Under each unit most of the entries are arranged geographically: those maps covering broad areas, such as the entire United States, are listed before maps covering smaller regions, and State maps precede county maps. Where this arrangement is not appropriate, entries are grouped chronologically or according to similarity of subject matter. Maps that cannot be identified with a specific section of a division and a few maps concerning the activities of the BAE as a whole are included under "General Records." Because O. E. Baker and F. J. Marschner were outstanding contributors to the cartographic and geographic work of the BAE, the maps they compiled or originated as members of the Land Utilization Section of the Division of Land Economics have been arranged under their names.

The date given for each entry is the date of compilation or publication rather than the period the map or maps cover; "n.d." is used if the compilation date is not known. Following the appendixes are a subject-name index and a geographic index to the maps.

The cartographic records described in this list may be examined in the research room of the Cartographic Archives Division in accordance with regulations issued by the Administrator of General Services. The National Archives is equipped to provide photostats and photographs of the maps in its custody, and information about the cost of reproductions will be provided upon request.

A number of entries in this list were drafted in preliminary form by Charlotte M. Ashby and Janet L. Hargett.

Records of the Office of Farm Management and Farm Economics

Early work in farm management surveys began in 1902 under the direction of W. J. Spillman, chief agrostologist in charge of the Division of Grass and Forage Crop Investigations in the Bureau of Plant Industry. In 1905 the Office of Farm Management was established within the Bureau of Plant Industry, with Spillman as Chief. The Office of Farm Management was transferred to the Office of the Secretary of Agriculture in 1915. After Spillman's resignation in 1918, the recommendations of a committee of workers in the field of farm economics led to a reorganization the following year. The name of the Office was changed to the Office of Farm Management and Farm Economics, and its research functions were expanded from farm management and practices to include cost of production, farm labor, farm finance, land economics, agricultural history and geography, and rural life. In 1920 it became an independent office.

When the BAE was created in 1922, research on farm management and types of farming regions was assumed by the new Division of Farm Management in the BAE. The mapping projects developed in the former Division of Agricultural History and Geography were continued in the Divisions of Land Economics and Statistical and Historical Research.

GENERAL RECORDS

1. Published land classification quadrangle maps of the Seattle and Takoma, Wash., areas, showing extent of forested land.

1897. 2 items. U.S. Geological Survey quadrangles based on surveys of 1894-95 and published in 1897. Acquired by the Office of Farm Management at an unspecified date, the maps are stamped "Farm Management Investigations Library."

2. Manuscript maps of the United States compiled from studies of truck farming in 1898.

ca. 1900. 27 items. A few of the maps may be incomplete. There is a separate map for each crop. A number is stamped on each map in the appropriate State to show acreage devoted to the crop, and dots are drawn in those counties in which the crop is grown commercially. Some of the maps also show amounts produced, and the last two refer to the industry as a whole.

The maps are arranged in the original file order as follows: dry beans, cranberries, onions, cauliflower, green beans, green peas, muskmelon, tomatoes, lettuce, asparagus, eggplant, kale, parsnips, rhubarb, radishes, celery, cucumbers, sweet corn, cabbage, spinach, squash, potatoes, Irish potatoes, truck crop and canning industry, and glass area used by growers.

3. Maps compiled by W. J. Spillman relating to grass and forage plant investigations.

ca. 1905. 25 items. Manuscript dot maps of the United States, including a map showing distribution of cattle in the western range country; a series of maps showing localities reporting significant production of bunch grass, carpet grass, crabgrass, crimson clover, crowfoot, grain and cowpeas cut for hay, Kentucky bluegrass, meadow fescue, millet hay, red clover, red top, and sorghum, kafir, and maize; a series of maps based on the 1900 census showing acreage distribution of corn, cotton, hemp, hops, kafir corn, oats, peanuts, and peas; and two maps showing the acreage of corn and forage crops in the Southeastern United States.

Spillman conducted early research on grasses and forage crops in the United States and promoted the establishment in 1895 of the Division of Agrostology, a separate unit within the Department of Agriculture which prepared studies of the geographical distribution, adaptability, and uses of grasses and forage plants. In 1901 Spillman became the Chief of the new Office of the Agrostologist in the Bureau of Plant Industry. From 1905 to 1918 he headed the Office of Farm Management and remained on the staff of the Division of Farm Management and Costs when the BAE was established.

Thirteen of the maps in this entry were published in W. J. Spillman, *Farm Grasses of the United States* (New York, 1905). These maps are among the earliest to make use of the dot method of cartographic representation, and they set an example for the later agricultural cartography of Henry C. Taylor and Oliver E. Baker. [See entry 19 and H. C. Taylor, *The Story of Agricultural Economics* (Ames, Iowa, 1952), p. 303.]

4. Unidentified manuscript maps relating to hay investigations.

ca. 1908 4 items. Three base maps of the United States marked "Hay - McClure," with numerous counties and parts of counties colored in red, orange, or green, and one duplicate map, all without explanation.

Harry B. McClure was a specialist in charge of hay investigations in various parts of the country for the Office of Farm Management in the years 1907-14. In 1923 he was head of the Hay Standardization Section of the Hay, Feed, and Seed Division, one of the newly established marketing divisions in the BAE. The functions and records of this Division were later transferred to the Agricultural Marketing Service.

DIVISION OF AGRICULTURAL HISTORY AND GEOGRAPHY

Most of the cartographic records of the Office of Farm Management and Farm Economics were created in its Division of Agricultural History and Geography. Work was begun with the appointment of the geographer Oliver E. Baker in 1912 and the establishment of a Section of Geographic Factors (later called the Section of Agricultural Geography). Sometime thereafter the historian Oscar C. Stine was appointed, and in 1919 the Division of Agricultural History and Geography was formed under the leadership of these two men.

The duties of the Division consisted of compiling historical and geographical data to create a better understanding of agricultural problems. Studies included the effects of economics, physiographic conditions, and foreign competition on past production and prices and the shifting geographic patterns of crops and population. Encouragement for these studies came from Henry C. Taylor, who was an agricultural economist at the University of Wisconsin before becoming Chief of the Office of Farm Management in 1919 and of the BAE in 1922.

Beginning in 1913 work centered on the preparation of the *Atlas of American Agriculture*, which was published in sections beginning in 1918 under Baker's direction. Although the atlas originally was planned to include types of farms, farm labor, crop patterns, land utilization, and rural population, in its final published form (1936) its scope was narrowed to the presentation of physical conditions affecting agriculture. (A copy of the 1936 volume is in Records of the Office of the Secretary of Agriculture, Record Group 16.)

On July 1, 1921, the history and geography sections began for a brief period to operate as separate divisions. Stine, as head of the History Division, emphasized economic history and foreign agriculture, and Baker, as head of the Geography Division, continued to map the existing agricultural patterns of the United States. When the BAE was officially established on July 1, 1922, Stine was made Chief of the Division of Statistical and Historical Research, and Baker became head of the Land Resources and Land Utilization Section of the Division of Land Economics.

Cartographers contributing to early mapping projects included R. G. Hainsworth, who later became chief draftsman for the BAE, and F. J. Marschner, who joined the Division of Land Economics as chief cartographer.

5. Published map of the United States showing irrigated areas in the Western States.

1915. 1 item. Compiled from 1910 census data, revised in 1914 by the Irrigation Division of the Office of Experiment Stations, and reduced and drafted in 1915 by the Section of Agricultural Geography.

6. Topographic relief maps of the United States compiled by F. J. Marschner for publication in the *Atlas of American Agriculture*.

1915. 5 items. Three manuscript worksheets showing topography, drainage systems, and boundaries and place names; a published copy of the topographic map combining the above three elements.

scale 1:8,000,000; and another published version with the addition of altitudinal tints, a copy of which was included in the final atlas. For other maps by Marschner, see entries 147-173.

7. Maps prepared for the *Atlas of American Agriculture* relating to climate.

1915-18. 27 items. Manuscript maps and worksheets prepared for sections of the atlas entitled "Frost and the Growing Season," by William G. Reed, published in 1918, and "Precipitation and Humidity," by J. B. Kincer, published in 1922. The maps were prepared in cooperation with F. J. Marschner. Included are large-scale base maps of the United States annotated according to Weather Bureau records to show average annual, seasonal, and monthly precipitation based on the 1895-1914 period; mean temperatures for the summer months; the average length of the frost-free season and data on the shortest growing season; and the earliest and average dates of the first killing frost in autumn and the earliest, average, and latest dates of the last killing frost in spring. In addition, there are three incomplete maps, one of which shows locations and altitudes of recording stations in the United States. Published copies of the two sections of the atlas are in Records of the Office of the Secretary of Agriculture, Record Group 16.

8. Advance section of the *Atlas of American Agriculture* entitled "Rural Population."

1919. 1 item. An article with maps, tables, and descriptive text published in 1919 but not included in the final version of the atlas. Some of the maps show by county the distribution of rural, village, and urban population in the United States in 1910. Others show information on rural population, including changes in distribution from 1900 to 1910, its relationship to the total population, Negro and white distribution, ethnic distribution (by country of origin of the foreign-born or those of foreign parentage), education and literacy levels, and the proportion unable to speak English. Tables give the 1900 and 1910 population for each State and county. Compiled by E. Goldweiser under the direction of O. E. Baker.

9. Incomplete manuscript dot map of the United States showing white farm population in 1880.

1914. 1 item. Drafting is incomplete in the Western States.

10. Manuscript map of the United States showing the distribution of tenant farmers in 1880.

1918. 1 item. Information is shown by dots plotted on a county outline base map. Annotated "For Dr. Taylor's book. Drafted Sept. 14, 1918."

11. Manuscript map of the United States showing the distribution of tractors on farms.

1917. 1 item. Information is shown by dots plotted on a county outline base map. See also entry 135.

12. Manuscript maps of the United States showing the historical distribution of rural population, 1790-1830 and 1900-1920.

1914-21. 12 items. The information is shown decennially by dots plotted on county outline base maps. Included are some preliminary sheets employing circles of varying sizes rather than uniform dots.

13. Maps of the United States showing historical density of population.

n.d. 2 items. Small-scale, photoprocessed maps showing population per square mile. One is a map showing the United States in 1790; the other comprises a panel of eight maps showing the United States decennially from 1850 to 1920. Copies of maps from the same series, dated 1790, 1810, 1830, and 1840, were published in Percy Bidwell and John Falconer, *History of Agriculture in the Northern United States, 1620-1860* (Washington, 1925).

14. Maps of the United States showing the distribution of farms in 1860 by farm size.

n.d. 7 items. Manuscript dot maps on tracing cloth; the enclosing folder is annotated "H. C. Taylor charts." There is a separate map for each of the following farm sizes by acres: 3-9, 10-19, 20-49, 50-99, 100-499, 500-999, and 1,000 and over.

15. Manuscript maps of the United States showing the historical distribution of farms, 1860-1920.

1921. 7 items. The information is shown decennially by dots plotted on county outline base maps. In 1926 the 1920 map was redrawn, and corrections were also made on the other maps.

16. Manuscript maps of the United States showing the historical distribution of land in farms, 1850-1910.

1916. 7 items. Acreage is shown decennially by dots plotted on county outline base maps. See also entry 17.

17. Manuscript maps of the United States showing the historical distribution of improved land, 1850-1910.

1921. 7 items. Acreage is shown decennially by dots plotted on county outline base maps. See also entry 16.

18. Manuscript maps of the Eastern United States showing the historical distribution of slaves, 1750-1840.

n.d. 8 items. Information is shown by dots plotted on county outline base maps. Coverage is for the years 1750 and 1775 and for every 10th year from 1790 to 1840.

19. Maps of the United States showing the historical distribution of crops and livestock from 1839 to 1919.

ca. 1912-23. 217 items. Manuscript dot maps based on the decennial censuses of agriculture, the first of which was taken in 1839. The information is plotted on county outline base maps, and there is a separate map for each crop and animal for each decade. In some cases worksheets and preliminary copies of maps duplicate information or provide slightly differing versions.

These maps, prepared under the supervision of O. E. Baker, were originally intended for inclusion in the *Atlas of American Agriculture* but were not published in the final reduced version. They were an outgrowth of an original series of such maps compiled for the first time from 1909 to 1912 by Henry C. Taylor while he was at the University of Wisconsin. (See H. C. Taylor, *The Story of Agricultural Economics*, pp. 303 and 316-19.) Many of the maps were used to illustrate the series of 30 historical and geographical articles appearing in the yearbooks of the Department of Agriculture for the years 1921-25, published under the supervision of Taylor and written by Baker, O. C. Stine, W. J. Spillman, L. C. Gray, F. J. Marschner, and others in the Department of

Agriculture. Small-scale versions of a few of the earlier maps (1839-59) were also published in Percy Bidwell and John Falconer, *History of Agriculture in the Northern United States, 1620-1860* (Washington, 1925).

Arranged in two categories, crops and livestock, thereunder alphabetically, and thereunder by decade. A list of the crops and animals covered follows; chronological coverage from 1839 to 1919 is complete unless stated otherwise. Maps covering the period 1919-35 are described in entry 121.

Crops. Distributions are shown in units of production, such as bushels or tons: alfalfa (1889 and 1919 only), apples (1889 to 1909 only), barley, corn, cotton (1909 missing), flaxseed (1869 missing), grapes, hay, hops, (1919 missing), oats, peas and beans (1839 and 1919 missing; separate information for peanuts, Canada peas, and cow peas is included), peaches and nectarines (1889 to 1909 only), potatoes (1919 missing), rice, rye, sweet potatoes (1839 missing), tobacco, and wheat (1919 missing; separate 1869 maps show spring and winter wheat).

Livestock. Cattle—total; cattle—except dairy (1839 missing); cattle—dairy (1839 missing); hogs; horses, mules, asses, and burros (separate 1909 maps show yearlings and animals of working age); oxen (1849 and 1889 only); and sheep.

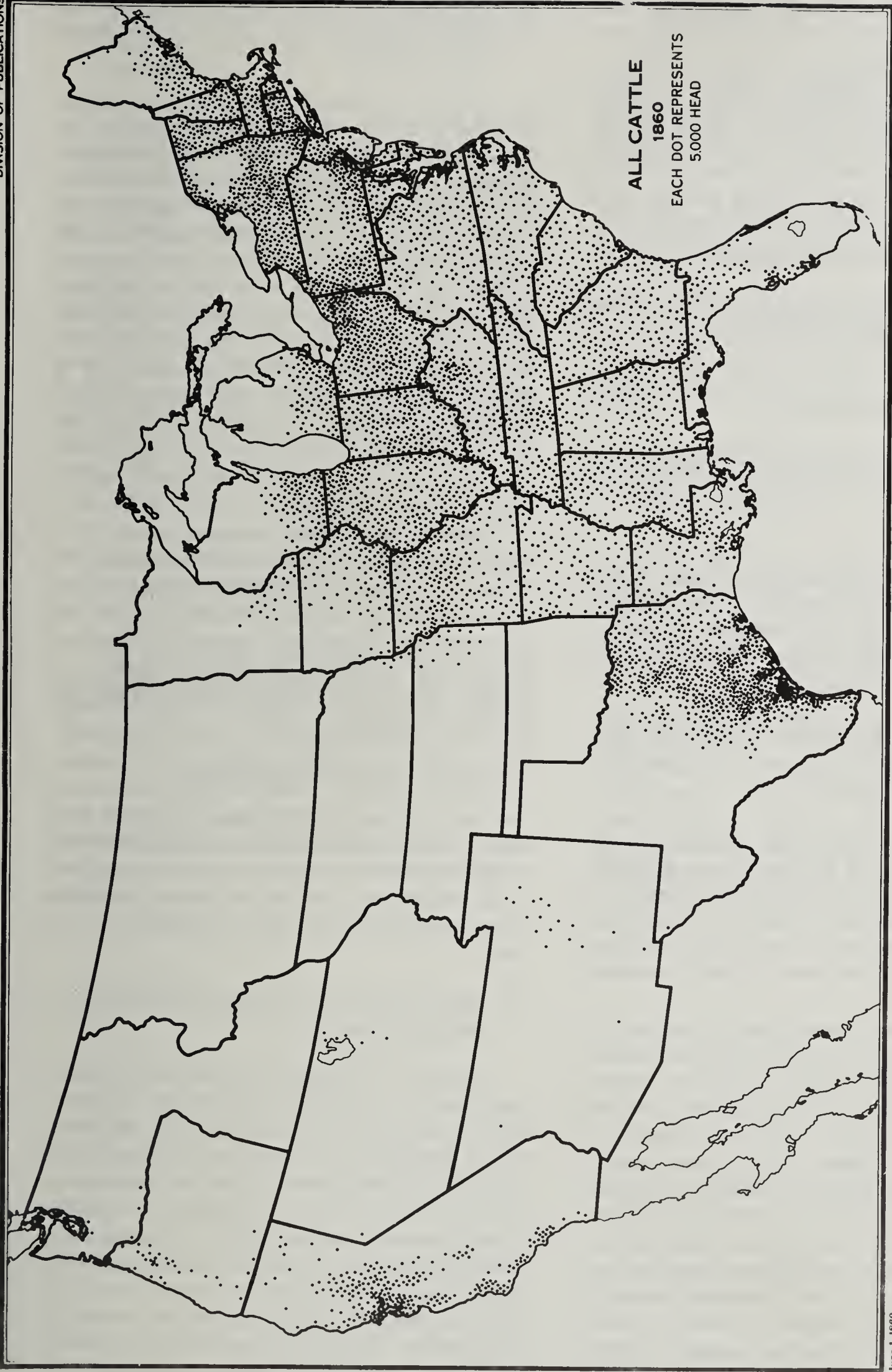
20. Maps of the United States showing the historical distribution of dairy products from 1839 to 1919.

1914-23. 33 items. Manuscript dot maps similar to those described in entry 19. Decennial coverage is incomplete, and preliminary worksheets and duplicate exist. Arranged chronologically under each type of product as follows: value of all dairy products, 1839 and 1899-1919, butter production, 1849-59, 1899, 1900, 1909-19, cheese production, 1849-1919 (two sets), and milk sold from farms, 1869-79 and 1899-1919. For later maps, see entry 122.

21. Maps of the United States compiled from the 1910 census showing acreages of selected crops.

n.d. 60 items. A series of photoprocessed maps of the same format. There is a separate map for each crop; information is shown by a dot in each county proportionate in size to crop acreage or production figures. Arranged alphabetically by name of crop.

Crops covered are: apples (by distribution of trees), asparagus, bees (by distribution of colonies),



June 1, 1860

OUTLINE MAP OF THE UNITED STATES

berries (blackberries, dewberries, loganberries, raspberries, and strawberries), broomcorn, cabbages, cantaloupes and muskmelons, castor beans, cauliflower, celery, clover hay, cucumbers, eggs (by dozens produced), green beans, green peas, green peppers, hemp, hops, lemons, lettuce, oats, olives, onions, oranges, peaches and nectarines, peanuts, potatoes, rye, sorghum cane, sweet potatoes, timothy hay, tobacco, watermelons, and wheat (includes acreage in Canada; separate maps for spring and winter wheat).

22. Manuscript maps of the United States showing wool production in 1900 and 1909.

1916. 2 items. Information is shown by dots plotted on county outline base maps.

23. Manuscript maps of the United States showing estimated wheat acreage in 1919 by type of wheat.

1921. 6 items. Information is shown by dots plotted on county outline base maps. Arranged alphabetically by the following types of wheat: common white, durum, hard red spring, hard red winter, soft red winter, and white club.

24. Atlas entitled *Geography of the World's Agriculture* by V. C. Finch and O. E. Baker, with related manuscript maps.

1917. 9 items. The sections relating to foreign countries were prepared by Finch; those relating to the United States, by Baker. Cooperating authors and cartographers included O. C. Stine, F. J. Marschner, and R. G. Hainsworth of the Office of Farm Management and staff members of other Department agencies.

Dot maps show production and acreages of crops and livestock; coverage of the United States is at the county level. Included are maps of Canada, Europe, the southern part of South America, Mexico, Cuba, Puerto Rico, India and Ceylon, Japan, the Philippines, Java, Algeria, Egypt, South Africa, Australia, and New Zealand. Included is a separate land relief map of the world taken from a 1915 atlas published by J. Paul Goode and annotated to show changes to be made for publication in this atlas. Also included is a series of six manuscript maps of Argentina, Chile, and Uruguay prepared for publication in the volume, showing acreages of corn, wheat, and grapevines and the distribution of cattle, sheep, and goats.

25. Manuscript maps of Argentina, Uruguay, and Chile relating to crops, livestock, farm types, and farm tenancy.

1918-21. 20 items. Arranged in three groups. The first group consists of seven dot maps of the three countries prepared in 1918, showing acreages of wheat and corn and the distribution of horses, sheep, swine, cattle, and ostriches, based on data from the period 1914-18. The second group consists of eight maps compiled between 1918 and 1921 based on statistics for Argentina in 1914, Uruguay in 1916, and Chile in 1917. These maps show the average size of farms reporting livestock in Uruguay and in each province of Argentina and the distribution of all farms in all three countries. They also present for Argentina and Uruguay data on the distribution of livestock and crop farms and the percentage operated by tenants of all farms, of crop farms, and of livestock farms. The third group consists of four maps of Argentina and Uruguay compiled between 1918 and 1921 and based on data from 1908-9 showing the distribution of grain farms, the distribution of grain farms operated by renters and by shareworkers, and the percentage of grain farms operated by renters and shareworkers combined. In addition, there is an undated base map on tracing paper showing the provinces of Argentina.

26. Rainfall maps of South America.

1918. 3 items. Wall maps annotated with average precipitation figures and isolines for June through August, for December through February, and for the entire year. The year or years or which the information is based is not given. Compiled by E. Van Cleef.

27. Maps of South America showing distribution of corn and livestock.

1920-21. 133 items. Six manuscript 22-sheet maps (scale 1:1,000,000) showing by dots the distribution of cattle, corn, goats, horses, sheep, and swine. All are preliminary, and some are annotated "not checked." The sheets showing corn are annotated on the back with the sources of statistical information for each country. Also included is a separate sheet covering the northern coastal areas producing coffee, cacao, sugarcane, wheat, cotton, coconut palm, and corn, and with descriptions of regions producing corn, potatoes, beans, yucca, sweet potatoes, peanuts, castor beans, and rice. Arranged alphabetically by name of crop or animal.

28. Manuscript maps of South America showing political divisions and settlements, topographic relief and rainfall, and the distribution of crops and livestock.

1920-21. 15 items. Maps prepared for a Farm Management Department bulletin entitled "Agricultural Competition From South America." Included are unfinished and final versions of an identification map showing provinces and other political subdivisions and the locations of numerous towns and settlements, based on data from the period 1900-1910; a map showing relief, annual precipitation by means of isolines, and average monthly precipitation at Bogotá, Colombia, Santa Fe and Cipolletti, Argentina, and Manáos, Cuyabá, Sabara, and Victoria, Brazil; and 11 dot maps showing the distribution of cattle, cocoa, corn, cotton, goats, rice, sheep, sugar, swine, and wheat.

29. Maps of Austria-Hungary and the Balkans showing agricultural data.

ca. 1919. 34 items. Photoprocessed maps bound into three volumes, including dot maps of Austria-Hungary showing forest areas and livestock distribution and of the Balkans, including Greece and western Turkey, showing arable lands, livestock distribution, and crop production and yields. These maps were intended for use by the American Commission To Negotiate Peace at the end of World War I and for inclusion in a proposed atlas of world agricultural data.

30. World map showing international trade in wheat, 1910-14.

n.d. 1 item. A photoprocessed map showing the average amount of wheat exported and imported by country and the volume of trade in wheat between countries for the years 1910-14.

31. Map of Nebraska annotated to show grazing lands in the northwest part of the State under the "Stock-Raising Homestead Act."

ca. 1920. 1 item. Acreage is shown by township and county. The map is marked "Data from Land Classification Board, Geological Survey, on Nov. 1920."

32. Maps furnished by A. E. Aldous of the U.S. Geological Survey relating to forage resources and grazing lands.

ca. 1922. 4 items. These maps were apparently used in the compilation of a map by O. E. Baker and A. E. Aldous entitled "Carrying Capacity of Pasture and Range Land" appearing in the article "Our Forage Resources," published in the 1923 *Yearbook of Agriculture*. They include three manuscript State maps showing the capacity for cattle grazing in the western halves of North and South Dakota and the eastern half of Montana and one manuscript map of North Dakota, copied from an original by Aldous, showing land classification in the western part of the State with a list annotated on the reverse stating percentages of tillable land by counties as estimated by "field men in Mr. Aldous' division."

Records of the Central Office of the BAE

GENERAL RECORDS

33. Map of the United States showing the distribution of BAE employees.

1924. 1 item. A photoprocessed map showing locations of field offices and numbers of staff members in each office as of March 1924, the locations of individual field agents, and nationwide telegraph connections used by the BAE. Compiled by the Division of Statistical and Historical Research.

34. Map of the United States showing field activities of the BAE.

1941. 1 item. A photoprocessed map showing administrative regions as of 1941 and the locations of State and regional offices. For earlier regions of the BAE, see entry 188.

35. Base maps showing political subdivisions.

1920-40. 368 items. Manuscript, photoprocessed, and published versions of maps originally used for compiling census and other agricultural data. Some show boundary lines only, but most include the names of subdivisions. Included are maps of the world, the hemispheres, and the continents showing national boundaries; regional maps, including maps showing the names of all provinces in Europe and European Russia in about 1915, in Europe, European Russia, the Middle East, and North Africa in 1939, and in Latin America in 1940; and maps of individual countries, including maps showing provinces of several Balkan nations in 1924, provinces of India in 1917, political districts and topography in Palestine in 1936, and provinces and counties in Australia, New Zealand, and the Union of South Africa during the early part of the 20th century.

About 300 of the items are maps of the United States showing State and county boundaries in 1900, 1931, and 1940 (a complete set of small-scale U.S. maps showing county boundaries decennially from 1840 to 1940 exists in Records of the Office of the Secretary of Agriculture, Record Group 16) and maps of the individual States and groups of States in the

United States showing counties, and in many cases the boundaries of minor civil divisions as they existed in various years.

The State maps are arranged chronologically under the following years, and thereunder alphabetically: 1920 (county boundaries; township maps of Indiana, Virginia, and the New England States only); 1930-31 (both county and minor civil division boundaries); 1933 (county boundaries; township maps for Idaho and Iowa only); 1935 (county boundaries; township maps for Ohio and Illinois only); 1939 (county boundaries only); and 1940 (minor civil division maps only for Florida, Illinois, Montana, Nebraska, New Jersey, Pennsylvania, Texas, Vermont and New Hampshire, West Virginia, Washington, and Wyoming).

Also included with the 1940 State maps are two copies of a three-part map of the Western States (Washington, Oregon, Idaho, California, Nevada, and Arizona), one copy of which shows the names of the minor civil divisions; maps of several sheets showing the boundaries but not the names of the minor civil divisions in the Southwest Intermountain States (Arizona, New Mexico, Utah, and Colorado) and the Rocky Mountain States (Montana, Wyoming, Colorado, New Mexico, and western Texas); and a map of Florida annotated to show annexations and corrections to minor civil divisions between 1934 and 1938.

36. Map of the United States showing percentage changes in population by counties during the early World War II period, 1940-43.

n.d. 1 item. A published map apparently prepared in connection with the Interbureau Committee on Postwar Programs, established in 1941 under the direction of the BAE.

37. Manuscript maps showing average precipitation in the United States.

ca. 1941. 3 items. Based on Weather Bureau data from 1899 to 1938 and published in the 1941

Yearbook of Agriculture. Two maps show average annual and warm season precipitation by isolines, and a third map shows average annual precipitation and the boundaries of major drainage basins in the country by lines and colors.

38. Sketch map of the Eastern United States showing natural forest and grassland climax areas.

n.d. 1 item.

39. Maps of the Hartly area, Kent County, Del., showing farms and land utilization.

n.d. 9 items. A series of nine manuscript and photoprocessed maps from an unidentified study showing land use and classification, dwellings, unoccupied houses and farms, types of roads and soils, and utilities. Included is a map of the surrounding counties showing taxes in relation to property value.

40. Map of the Frametown area of Braxton County, W. Va., showing farm buildings, land use, and slope.

ca. 1940. 1 item. A photoprocessed map compiled for an unidentified study.

DIVISION OF FARM POPULATION AND RURAL LIFE

In 1919 a Farm Life Studies Section was established in the Office of Farm Management and Farm Economics to continue studies formerly carried on in the Bureau of Markets. When the BAE was established in 1922, the Farm Life Studies Section became the Division of Farm Population and Rural Life. In 1939 the name was changed to the Division of Farm Population and Rural Welfare, and in 1947 it was rechanged to the Division of Farm Population and Rural Life.

The functions of the Division included research and planning in the areas of population estimates, migration, human geography and settlement patterns, community and local organizations, standards of living, farm labor and disadvantaged classes, social psychology of the farmer, and the history and influence of farmer's movements and organizations.

When the BAE was abolished in 1953, the Division's farm labor research function was transferred to the Agricultural Research Service, and the remainder of its functions were transferred to the Agricultural Marketing Service.

41. Map showing rural cultural regions of the United States.

1940. 1 item. A published map prepared from data in the Works Projects Administration Special Research Report, "Rural Regions in the United States," by A. R. Mangus and T. J. Woofter, Jr. Shown are 34 regions grouped according to historical, social, and economic characteristics. Explanations keyed to the regions appear on the margins of the map. In addition, symbols show major nonfarm industries in rural industrial areas.

42. Urban population map of the United States based on the 1930 census.

1933. 1 item. A small-scale, photoprocessed dot map.

43. Maps of States showing changes in population.

ca. 1941. 3 items. Published maps including a map of the North Central States (Ohio, Michigan, Indiana, Illinois, Wisconsin, Minnesota, Iowa, and Missouri) showing county population changes, 1930-40, a map of Illinois showing changes by townships, 1930-40, and a map of Kansas showing changes in county populations in the decades 1890-1900 and 1930-40.

44. Map showing per capita Federal expenditures by counties in States west of the Mississippi River, 1933-39.

ca. 1940. 1 item. A similar map showing only Region 7 appears in entry 208.

45. Graphs relating to farm economy surveys in the Pacific Northwest and the Great Plains.

ca. 1940. 7 items. Compiled from data supplied by the consumer purchases study, Bureau of Home Economics. Included are charts showing the income and expenditures and savings or deficits of 984 farm families in North Dakota and Kansas and of 383 families in Oregon. Also included are charts showing for 948 farm families in Oregon and Washington the same information, as well as expenditures for automobiles and medical care and value of housing and food consumed. The Oregon and Washington graphs are duplicated in entry 213.

46. Maps showing historical interstate migration, 1870-1930.

ca. 1940. 41 items. Two groups of photoprocessed panels of maps tracing the historical migration of population into or out of selected States according to census returns. Each panel relates to a single State and consists of seven maps of the United States covering the seven census years from 1870 to 1930. Each map in the first group of panels (concerning in-migration) shows the number and distribution, according to State of birth, of persons born elsewhere but living in the State at the time of the census; each map in the second group of panels (concerning out-migration) shows the number and distribution, according to new State of residence, of persons born in the State but residing elsewhere. Numbers of migrants are shown by circles of varying size. In addition, each panel contains a capsule history of the flow of population into or out of the State during the time period.

The States covered in each of the two groups are as follows: *Group 1* (in-migration): Arizona, California, Connecticut, District of Columbia, Florida, Georgia, Idaho, Illinois, Kentucky, Montana, Nevada, North Dakota, Oregon, Pennsylvania (Negro immigrants only), South Carolina, South Dakota, Texas, Utah, and Washington. *Group 2* (out-migration): Arizona, California, Delaware, District of Columbia, Georgia, Idaho, Illinois, Kansas, Louisiana, Minnesota, Mississippi, Nebraska, Nevada, New Mexico, Oregon, Pennsylvania, Rhode Island, South Carolina, Texas, Utah, Vermont, and Washington.

47. Published map of Wisconsin showing population by ethnic stocks.

1940. 1 item. Based on 1905 Wisconsin census data and revised to 1940 by examination of county and property records and field visits. Ethnic groups are shown by colors and symbols printed over a base map showing townships.

48. Population distribution map prepared for the Mississippi Backwater Areas Study—Yazoo Segment.

1940. 1 item. Dot map published for an investigation conducted by the Department of Agriculture and using 1930 census data. Related maps are described in entry 82.

49. Maps from reconnaissance surveys of isolated agricultural areas in Lincoln and Benton Counties, Oreg.

1940. 2 items. Published maps showing farm units, buildings, and types of roads.

DIVISION OF AGRICULTURAL FINANCE

In 1919 work in rural credit was transferred from the Bureau of Markets to the reorganized Office of Farm Management and Farm Economics, and a section on farm financial relations was established. When the BAE was formed in 1922, financial studies were placed in the new Division of Agricultural Finance. This Division continued until 1953 when the BAE was abolished. The functions of the Division were then transferred to the Production Economics Research Branch of the Agricultural Research Service.

50. Maps of the United States showing distribution of loans to farmers, 1937-39.

1938-40. 3 items. Small-scale manuscript and photoprocessed maps showing loans made by the Rural Electrification Administration in 1937, loans approved for the tenant purchase program as of June

30, 1939, and Commodity Credit Corporation loans of the 1937-38 season. Prepared for Wall and Horton of the Division.

51. Photoprocessed map of the United States showing locations of production credit associations.

1937. 1 item.

DIVISION OF CROP AND LIVESTOCK ESTIMATES

The Bureau of Statistics was established in 1903 to continue earlier attempts to gather and report statistics concerning crop and livestock production. The name was changed to the Bureau of Crop Estimates in 1914, and it was merged with the Bureau of Markets in 1921. In 1922 the combined Bureau of Markets and Crop Estimates was merged with the Office of Farm Management and Farm Economics to form the BAE. Estimating functions were assigned to the Division of Crop and Livestock Estimates. In 1938 the Division was transferred to the Agricultural Marketing Service, but in 1942 it was transferred back to the BAE. When the BAE was abolished in 1953, its functions were transferred to the second Agricultural Marketing Service.

The following two entries describe the only items of the Division found among the cartographic records of the BAE. Not described in this list are maps the BAE began to prepare in 1937 to supplement crop reports. These maps were drawn to show crop or pasture conditions by counties and frequently were flashed out by wire to press associations for publication with crop reports. A number of them, particularly those dating from the late 1940's, are interfiled among the textual records of the Division.

52. Published State maps showing counties included in crop reporting districts.

n.d. 48 items. Arranged alphabetically by name of State.

53. Photoprocessed map of the United States showing by State the 1938 rural cost of living as a percentage of the U.S. average.

1938. 1 item. Prepared for Hale of the Division.

DIVISION OF MARKETING AND TRANSPORTATION RESEARCH

The Division of Marketing Research, established in 1934, and the Division of Transportation, established in 1938, were combined in 1939 to form the Division of Marketing and Transportation Research under the leadership of F. V. Waugh. Research was conducted to improve marketing, handling, storage, processing, and transportation of farm products and to reduce costs in these areas. The Division's functions were transferred to the Agricultural Marketing Service in 1953 when the BAE was abolished.

54. Photoprocessed dot map of the United States showing commercial production of fruits and vegetables in 1936.

1937. 1 item.

55. Photoprocessed maps of the United States relating to the sale and distribution of farm products, 1934-39.

1937-39. 9 items. Shown by States are the destinations of carloads of potatoes, vegetables, and fruits from Georgia, cabbages and lettuce from New York, strawberries from Louisiana, and cabbages from Texas and Mississippi. Included is a map showing the locations of potato shipping areas of the United States in 1935. Also included is an incomplete map indicating State origins of fruits and vegetables received by truck at San Francisco in 1936.

DIVISION OF FARM MANAGEMENT AND COSTS

Farm management research originated in the Office of Farm Management in the period 1905-22 under the guidance of W. J. Spillman. Early studies in this area were conducted on farm efficiency and the effect of external conditions on farms. When the BAE was established in 1922, farm management research was assigned to the new Division of Farm Management. In 1924 the Division was combined with the Division of Cost of Production to form the Division of Farm Management and Costs. It retained this title until 1953 when its functions were transferred to the Agricultural Research Service.

The functions of the Division included analyzing the organization of the most effective farm units and returns from farms differing in size, type, and location, compiling an inventory of the existing types of farming

regions, and studying the influence of the land use adjustment programs of the 1930's and 1940's on farm economics. The Division worked closely with the Division of Land Economics in these fields.

56. Maps of the United States showing types of farming regions.

1930-49. 15 items. Six series of maps showing different versions of agricultural regionalization, based on kinds of crops grown as influenced by physical factors. Included are published, annotated, and worksheet copies of the following maps: (1) Type of farming areas in the United States, 1930. A joint effort of the Census Bureau and the BAE, keyed to 514 farming regions listed in the margins. (2) Regionalized types of farming in the United States (ca. 1935), with a subregional breakdown. The earlier versions were published by the Planning Division of the Agricultural Adjustment Administration. (3) Type of farming areas. A small-scale map marked "experimental," undated, but probably compiled about 1935. (4) Generalized types of farming in the United States, on a county boundary basis. Also small-scale and undated. (5) Generalized types of farming in the United States. Edition of 1949, republished in 1957 by the Agricultural Research Service as a sheet of the *National Atlas of the United States*. (6) A set of unidentified manuscript maps drawn on 1940 base maps showing a regionalized breakdown using county boundaries. The set includes separate maps for subcategories of wheat, specialty-crop, range and livestock, and other areas. ("Sample" and "laboratory" counties are shown on the latter maps.) An earlier agricultural regions map compiled by O. E. Baker is described in entry 120.

57. Published map showing seasonal movements of range sheep in the Intermountain region, 1938-39.

ca. 1941. 1 item. Compiled from records of the Forest and Grazing Services. Movements by railways, trails, and grazing are differentiated, and numbers of sheep moved are indicated by widths of lines. Land use and landownership are also shown. The map centers on Nevada, Utah, Idaho, and Oregon. An accompanying report entitled "Sheep Migration in the Intermountain Region," by Hochmuth, Franklin, and Clawson of the Division of Farm Management

and Costs in the Berkeley regional office, was published in 1941.

58. Published map showing general soil regions of North Dakota.

1941. 1 item. Prepared in 1936 as part of the program to differentiate type of farming regions and revised in 1941 by the North Dakota Agricultural College. Shown are 24 categories of soils. An accompanying text explains the map's preparation and identifies in detail soil groups on the map.

59. Published map of Arkansas showing yield per acre of cultivated land.

ca. 1935. 1 item. A highly detailed, large-scale map published by the University of Arkansas' College of Agriculture. Shows by operating units the average number of pounds of lint cotton and bushels of rice or corn produced per acre, based on periods of several years. Also shows the locations of cotton gins and identifies by number each section of the statewide township and range survey system.

60. Manuscript maps of Kentucky.

ca. 1932. 2 items. A base map on tracing paper showing physiographic regions and a map showing the locations of transportation routes serving the Bluegrass region. These maps may have been compiled for a 1935 report by W. J. Roth and Bruce Poundstone on type of farming regions of Kentucky.

61. Manuscript maps of the Tieton Irrigation District, Yakima County, Wash.

1937. 10 items. Shown at the farm unit level are gross crop income, acre-feet of water per irrigated acre, irrigated land as a percentage of irrigable land, land tenure, type of farm by crop, pasturelands, and the distribution of alfalfa hay, apples, and pears. Prepared for E. B. Hurd of the Berkeley regional office. See also entry 222.

TOBACCO DIVISION

The collection of statistics concerning tobacco was assigned to the Tobacco Section, which was established in 1930 and attached as a separate unit under the Chief of the BAE. In the reorganization of 1938-39 the section was renamed the Tobacco Division; shortly thereafter all research functions in connection with tobacco were transferred to the newly established Agricultural Marketing Service.

62. Map of the Eastern United States showing tobacco-growing districts.

1932. 1 item. A published map. Sixty-three kinds of tobacco-growing areas are identified in the margins and keyed to the map.

DIVISION OF STATISTICAL AND HISTORICAL RESEARCH

When the BAE was established in 1922, historical research in agriculture and the collection of important agricultural statistics, both domestic and foreign, were assigned to the new Division of Statistical and Historical Research. The Chief of the Division, O. C. Stine, had been in charge of the historical work of the Division of Agricultural History and Geography of the Office of Farm Management and Farm Economics and also had been Acting Chief of the Division of Records and Research of the Bureau of Markets and Crop Estimates for a brief period before the BAE was established.

The functions of the Division included maintaining files on matters of permanent statistical value collected by various BAE divisions and gathering, correlating, and interpreting information on foreign competition and markets obtained from U.S. representatives stationed abroad. The research on foreign agriculture, which the Bureau of Statistics had conducted before 1922, was transferred in 1930 to the newly established Foreign Agricultural Division, later called the Foreign Agricultural Service. (Several of the following maps relating to foreign areas are annotated with the name of L. K. Thompson, who was in charge of foreign crop records and analysis during the 1920's.)

63. Manuscript world maps illustrating activities of the Department of Agriculture.

ca. 1925. 3 items. Two maps showing agricultural surveys conducted by the Department of Agriculture in foreign areas, 1923-24, and mail and telegraph connections from Washington, D.C., to 69 cities abroad through the International Institute at Rome, and a third, unidentified map, apparently indicating foreign offices that supplied information to the Department.

64. Records relating to the world distribution of horses and other animals.

1923. 3 items. Two versions of a manuscript dot map of the world showing distribution of horses, mules, and asses and an historical chart showing numbers of these animals in Argentina, British India, European Russia, Germany, and the United States annually from 1840 to 1923.

65. Manuscript maps of Chile showing distribution of crops and livestock.

1923. 17 items. Dot maps showing the production of barley, beans, chick-peas, corn, lentils, oats, peas, potatoes, rye, tobacco, and wheat in 1921, the acreage devoted to fruit trees and grapevines in 1921, and the distribution of cattle, goats, horses and mules, sheep, and swine in 1919.

66. Sketch map of Eastern Russia showing agricultural regions.

1927. 1 item.

67. Published dot map of the world showing average annual cotton production.

1934. 1 item. Based on averages for 1926-27 and 1930-31. Dots are placed on a base map showing national boundaries.

68. Manuscript map of the United States showing planting dates for spring wheat.

ca. 1925. 1 item. Based on 3,000 reports from township correspondents of the Bureau of Crop Estimates. An inset map shows spring wheat acreage, 1909.

69. Records relating to climatic studies.

ca. 1931. 2 items. A published panel of two maps of North Dakota comparing the distribution of precipitation to average wheat yields and a published panel of two graphs showing historical climatic

conditions in the Harney Basin, Oreg., and at Havre, Mont., as indicated by the annual growth of tree rings from 1730 to 1930. The graphs relating to Oregon appeared in L. T. Jessup, "Precipitation and Tree Growth in the Harney Basin, Oregon," *Geographical Review* (April 1935).

DIVISION OF STATE AND LOCAL PLANNING

Land use planning based on local participation began in the Program Planning Division of the Agricultural Adjustment Administration in the mid-1930's. In 1938 the BAE was made the central land use planning agency for the Department of Agriculture, and in July of that year the Mount Weather Agreement was made with the Land Grant College Association to establish State and county land use planning committees in all States and in agricultural counties. The Division of State and Local Planning was established under the BAE in the early part of 1939 to assume the planning work of the Agricultural Adjustment Administration and to direct this enlarged program of intensive and unified planning.

The local planning committees consisted of both farmers who were knowledgeable about local problems and State and Agriculture Department representatives who provided guidance. Area mapping, land classification, and the formulation of adjustment goals had been started by 447 counties in 1939 and by 976 counties as of 1940. The role of the Division was largely auxiliary; it included providing assistance in mapping, reproducing and transmitting maps to local and Federal agencies to whom they would be of most use, and maintaining a current fund of textual and cartographic information. The Service Unit of the Division transferred county land use planning information on to State, regional, and national maps.

The maps created as a result of the program were used in recommending sites for Federal land purchase and development projects, in providing information useful to the Farm Security Administration and local zoning boards who desired to limit farming to favorable land, and in planning local land taxes, road construction, farm extension work, and national forest boundaries.

In February 1942 the name of the Division was changed to the Agricultural Planning Field Service. Because of policy disagreements and a lack of Congressional funding, the newly created Field Service was abolished in the summer of 1942, but some of the local committees continued their activities after that date.

70. Published maps of the United States showing status of the county land use planning program.

1939-41. 9 items. Shown are counties selected for land use programs, 1939-41, major types of county planning programs, counties involved in area mapping and land classification, and counties with actively functioning county and community planning committees as of 1940 and 1941.

Included are maps of Williamstown, Mass., Deuel, Harlan, Scotts Bluff, and Thayer Counties, Nebr., Carroll and Sullivan Counties, N. Dak., Clark, Hocking, Morrow, Noble, Paulding, Pickaway, Seneca, and Wyandot Counties, Ohio, and Bristol County, R.I.

71. Preliminary land use maps compiled by county and community planning committees.

1936-41. 24 items. The first phase of the land use mapping and classification program consisted of intensive mapping of the existing land use areas of participating counties to serve as a geographic setting for future local planning. Apparently only a few maps of this type became a part of the files of the BAE.

72. Recommended land use classification maps compiled by State and county planning committees.

1938-41. 437 items. The second phase of the land use mapping and classification program called for an analysis of the previously mapped land use areas and a compilation of classification maps according to the following categories of recommended land use adjustments: (A) areas in farms which were unsuited for farming and which should be put to some other use, (B) areas neither in farms nor suited

for farming, (C) areas in farms which were of either questionable or unknown suitability for farming, (D) areas not in farms but suitable for development into farms, and (E) areas in farms which should remain in farms, with or without adjustments in agricultural practices.

Most of the maps are of counties and are based on county highway maps; only five are State maps. Some are manuscript, but many were drafted and published by the BAE. A few of the maps have no key but use the following color scheme for the categories described above: A—blue, B—green, C—red, D—orange, and E—yellow. Not all of the maps categorize land according to this standard classification, and some show greater detail in existing land use than others.

Further detailed information concerning the purposes of the maps and the instructions by which they were compiled are given in *Work Outline Number One Covering an Area Mapping and Classification Project Recommended for County Agricultural Land Use Planning Committees* (January 1939), prepared by the Land Economics Division and other agencies concerned with land use planning. Copies of this book are filed among the textual records of the BAE and in the Cartographic Archives Division of the National Archives.

Arranged alphabetically by State and thereunder by county. A list of the areas covered appears in appendix I.

73. Miscellaneous county maps prepared by county planning committees in connection with land use studies.

1936-41. 65 items. Manuscript and published maps, often complementary to the land classification maps described in entries 71 and 72, showing a variety of agricultural and other information, including landownership, land use, soils, roads, and boundaries of planning communities. Arranged alphabetically by State. The maps are described in appendix II.

74. Map of south central Florida.

ca. 1939. 1 item. A photoprocessed map with an annotation indicating the watershed of the Kissimmee River. The base map is one of a series of maps compiled in Region V of the Resettlement Administration entitled "Land Classification According to Type of Land Use Problem." (See also entry 111.). It also shows towns, roads, railroads, elevation contours, water depths in Lake Okeechobee, drainage districts, and canals, and it covers an area of Florida from the Gulf of Mexico to the Atlantic.

DIVISION OF LAND ECONOMICS

The Division of Land Economics was established on July 1, 1919, in the Office of Farm Management at the time of the latter's reorganization as the Office of Farm Management and Farm Economics. When the BAE was established in 1922 the Division was enlarged by consolidation with two other units (the Division of Farm Labor and the geography section of the Division of Agricultural History and Geography) which had also existed since 1919 as part of the Office of Farm Management and Farm Economics. L. C. Gray was in charge of the Division from 1922 until 1937.

The Division was initially entitled "Land Utilization," but its name was soon changed to "Land Economics." Its purpose was to study the broad problems of the economic relations of man to the land. From its creation until 1937 it conducted studies that included the following subjects: land resources and utilization, land settlement and colonization, landownership and tenancy, land valuation, the supply and welfare of farm laborers, and the water supply of the arid grazing lands of the public domain.

In 1927 the Division organized a section on local land utilization and regional planning, a forerunner of the land use planning programs of the 1930's. The Division was also instrumental in calling the Land Utilization Conference of 1931, which resulted in the establishment of the National Resources Board. Gray, while remaining Chief of the Division, also headed the Land Policy Section of the Agricultural Adjustment Administration and the land utilization program of the Resettlement Administration.

When the land utilization program of the Resettlement Administration was transferred to the BAE in 1937, the Land-Use Planning Section of the Resettlement Administration's Land Utilization Division merged with the Division of Land Economics, greatly expanding the latter's staff. Included in the transfer was a section devoted to

land classification and mapping. At the same time, research in water utilization and flood control was assigned to the Division.

During the next year all agricultural planning work relating to the economic relationship between population and land resources and to the location of sites for land utilization projects was concentrated in the Division. The administration of those projects was transferred to the Soil Conservation Service in October 1938, but land classification and land use planning remained a part of the Division's work. (The cartographic records of some of the local land utilization studies the Division conducted are described below and among the records of the western regional office.)

About the year 1941, however, partly because the task of land planning at the county level had been assumed by the Division of State and Local Planning, emphasis in the Division of Land Economics reverted to broad research in land utilization and away from specific planning problems. In addition to investigations relating to the war effort during the 1940's and to the war's effect on settlement and land utilization, the Division continued its long-range studies until 1953, the year the BAE was abolished. Its functions were then transferred to the Production Economics Research Branch of the Agricultural Research Service.

General Records

75. Photoprocessed map of the United States showing gross farm income per rural inhabitant by county.

1930. 1 item.

76. Map of the United States showing value of farmland and buildings per acre by minor civil division.

ca. 1937. 1 item. Published in cooperation with the National Resources Board and the Farm Credit Administration and based on data from the 1930 census. A similar map of California appears in entry 241 (map 22).

77. Published map of the United States showing periods of peak seasonal labor requirements in agriculture according to type-of-farming regions.

n.d. 1 item.

78. Maps relating to the 1937 Census of Unemployment.

1940. 4 items. Small-scale, photoprocessed dot maps of the United States drafted for Ray Smith showing the distribution of males partly unemployed and totally unemployed and of males living on farms as emergency workers.

79. Map of the United States showing lands purchased by the War and Navy Departments as of October 31, 1944.

n.d. 5 items. Five manuscript duplicates. Sites are located by circles whose sizes and colors denote acreage and purchaser. The work of the Division included studies of the approximately 50,000 families displaced from war purchase sites.

80. Maps relating to soil-protecting crops in the Mississippi River watershed region, 1934.

1938. 3 items. Photoprocessed maps showing the distribution of crops affording, affording only partial, and not affording soil protection. Prepared for M. Kelso, Chief of the Division, 1937-41.

81. Maps relating to a study of farm tenancy and sharecropping in the Southeastern United States.

ca. 1936. 6 items. Maps and panels of maps, apparently photocopies from sheets originally compiled by the Research Section of the Resettlement Administration, showing the following information: areas increasing in farm population through immigration of previously nonfarm residents, 1930-35; relative changes in the white-Negro ratio of farm tenants and sharecroppers by county for the periods 1925-30 and 1930-35; the average farm acreage by State for Negro and white sharecroppers in 1935; the values of land, machinery, and buildings for Negro and white tenants in 1930; percentages of Negro farmers by county, 1935; percentages of cotton farms by county, 1935; and percent change by county between 1930 and 1935 of farms reporting sweet potatoes, corn, cattle, and swine.

Also included are two maps of the United States showing percentages of tenant and cropper farms, 1935, and major cash-crop and tenancy regions, 1935.

82. Maps relating to the Mississippi Backwater Areas Study—Yazoo Segment.

1940. 13 items. Compiled for investigations of land utilization and of the socioeconomic effects of flooding in this area conducted by the Department of Agriculture. Included are maps illustrating studies made by the various sections of the Division and by other agencies showing frequency of floods, land-ownership and tenure, forest conditions, land use, recommended land classification, taxing areas, and soils. Also included are separate land classification maps for Humphreys, Issaquena, Sharkey, Warren, Washington, and Yazoo Counties. A related map is described in entry 48.

83. Maps of Montana, New Mexico, Oregon, Utah, and Wyoming annotated to show irrigated lands.

n.d. 5 items. General Land Office and Geological Survey base maps with preliminary annotations showing irrigated areas in considerable detail. The base maps are dated from 1908 to 1930, but the annotations are not dated. Other annotations indicate that the maps were being prepared for reproduction or publication.

84. Maps showing land classification in the Great Plains.

1925-30. 58 items. A series of published maps covering the northern and central Great Plains compiled by the Land Classification Board of the U.S. Geological Survey for an atlas of the Great Plains, started by the Land Economics Division of the BAE. Includes a complete published set combined into a folio with a covering index map and an incomplete set of preliminary and final editions, some annotated with instructions and the names of E. O. Wooten, W. A. Hartman, and O. E. Baker, all on the staff of the Division. Some mountain areas, such as the western half of Colorado, are included in the land classification. Arranged by geographic area. Duplicate copies appear in entries 109 (part J) and 186.

85. Land use maps of Washington, Utah, Maine, and parts of Colorado.

1933-46. 9 items. Included are a large-scale map of Washington compiled in 1933 by the State Agricultural Experiment Station in cooperation with the BAE, showing irrigated and nonirrigated farming, forests, and other areas; a manuscript map of Utah prepared in 1934 showing major land uses and land cover; a map of Utah published in 1946 by the Soil Conservation Service showing resource areas and annotated to show irrigated and dry farming areas; photoprocessed maps of Maine, ca. 1940, showing types of forests and types of crops grown; photoprocessed maps of Washington County, Colo., showing landownership patterns and distribution of cropland and pasture in 1934; and undated manuscript maps on tracing paper relating to the Dove Creek area of Dolores and Montezuma Counties, Colo., showing the area's location, land classification, and landownership patterns.

86. Maps of Arkansas relating to cotton acreage.

ca. 1939. 2 items. Published maps, labeled "Figure 1" and "Figure 2," showing by counties the census years in which cotton acreage peaks occurred (ranging from 1879 to 1939) and percentage change between each peak year and 1939.

87. Maps of Michigan showing State-owned land and State tax land in 1934 by operating units.

n.d. 2 items. Manuscript and published versions prepared for L. C. Gray, head of the Division until 1937.

88. Map of Massachusetts annotated to show the Quabbin Reservoir on the Swift River.

ca. 1940. 1 item. The reservoir boundaries are shown on a 1937 base map. The Quabbin or Winsor Dam was first used in 1939 to supply water for Boston, and the new reservoir caused substantial resettlement from previously populated farmlands.

89. Map of Alabama showing types of rural landownership by operating units.

ca. 1937. 1 item. Large-scale, preliminary blueprint map based on county plat sheets for 1935 and

1937 and annotated with recommended changes in format. Annotations indicate the map was supplied by Johnson of the Little Rock, Ark., regional office.

90. Maps of Alabama relating to farm economics and crops, 1929-35.

n.d. 12 items. A series of photoprocessed dot maps apparently prepared for publication. Information is plotted on county outline base maps. Shown are the distribution of farms and acreages of land in farms and acreages of land not in farms in 1935; acreages of cropland harvested and of woodland pasture in 1934; value of farm products purchased and sold cooperatively during 1929; value of farm forest products sold during 1934; value of hired labor in 1929; distribution of tractors in 1930; acreages of pecan trees of nonbearing age in 1930; and acreages of cotton in 1934.

91. Annotated soil map of Missouri.

1931. 1 item. A published map prepared by the State Agricultural Experiment Station and annotated by L. A. Reuss with unidentified regional boundary lines.

92. Published population map of California based on the State census of 1935.

n.d. 1 item. A highly detailed dot map compiled by the Land Economics Division under the direction of Philip J. Webster, State land use planning specialist for California, with the assistance of the U.S. Forest Service. The smallest dots indicate groups of 25 persons. The map differentiates between farm and nonfarm concentrations. An index to the map lists all urban concentrations of 100 people or more, and an inset map shows an enlargement of Los Angeles County. Scale approximately 1 inch to 15 miles. Related maps are described in entry 253.

93. Published map of California annotated to show irrigated lands, desert and dry lake areas, and the All-American Canal.

n.d. 1 item. Annotated by E. O. Wooten on a 1913 base map.

94. Published map of North Dakota showing land under cultivation in 1935 by minor civil divisions.

1939. 1 item. Compiled in cooperation with the Works Progress Administration.

95. Published maps of Burke, Burleigh, and Sargent Counties, N. Dak., showing land use, tax status, and related information.

1938. 17 items. Included are maps of Burke County showing tax expenditures, sources of tax income, land tax valuation, tax delinquency status of land, use of farmland, grade school population, public assistance by townships, size of operating units, and cover crops (compiled from aerial photographs); a map of Burleigh County showing cultivated and uncultivated lands; and maps of Sargent County showing landownership, tax status, suitability of soil for agriculture, sizes of 1,185 farms, size range of farms by township, cultivated and uncultivated land (compiled from an aerial photograph), and the proportion of land devoted to wheat and other crops.

96. Maps relating to a study of Hand County, S. Dak.

ca. 1940. 7 items. Photoprocessed maps of the county showing the locations of towns within and near the county, the locations and sizes of all farm families in 1940, boundaries of church, trade, and community and neighborhood areas, the locations of operating and abandoned schools, the distribution of ethnic groups, and the locations of Federal, State, and county improved roads.

97. Maps of Spokane County, Wash., showing agricultural conditions.

ca. 1939. 6 items. Large-scale manuscript maps compiled jointly by the State land planning specialist, the Land Economics Division, and the State Agricultural Experiment Station. The maps are marked "Exhibit II" through "Exhibit VII." Subjects shown are quality of soil, types of forest growth and agricultural land, tax delinquency status in 1938, status of Federal bank loans in 1939, type of ownership by individual operating units, and roads, schools, and other improvements.

Land Classification Section

In the mid-1930's a Land Classification Unit was formed in the Department of Agriculture and became part of the Land-Use Planning Section of the Resettlement Administration's Land Utilization Division. Carleton P. Barnes, formerly of the Division of Land Economics of the BAE, headed the Unit. When the Land-Use Planning Section was merged with the Division of Land Economics in 1937, the Land Classification Unit became one of four sections devoted to land problems. At this time Barnes left the staff to eventually join the Land Use Coordinator's Office and was replaced by J. J. Haggerty as acting head of the section.

The section's functions included giving guidance to land classification surveys, conducting experimental work in types of area classification, compiling bibliographies related to land classification, and developing regional and national summaries, largely in map form, of land use and of proposed land use changes. Each of the Resettlement Administration's 11 regional offices had one or more men giving attention to land classification activities.

The records indicate that in the summer of 1941 the Land Classification Section was merged with the Land Resources and Utilization Section to form the new Land Utilization Section, of which Haggerty became head.

98. Map of the United States showing submarginal cropland.

1933. 1 item. An early manuscript map prepared by C. P. Barnes while he was an assistant agricultural economist in the BAE. Based on a 1933 map by Barnes and Marschner entitled "Natural Land Use Areas of the United States" (see entry 154), the map shows four categories of land with varying percentages of submarginal cropland as of November 10, 1933. Because the map is generalized, small irrigable areas amidst the dry submarginal lands of the Western States are not shown.

99. Land Use Planning maps prepared under the direction of State land planning consultants.

1934-39. 76 items. Included are maps of Arkansas, Georgia, Illinois, Louisiana, Michigan, Mississippi, and Texas. Similar maps relating to the Western States are described in entry 241.

State land planning consultants (later called land use planning specialists) were appointed in each State in 1934 under the National Resources Board to provide basic information for a report to the President on national planning, including an inventory of the natural resources of the country and suggestions for solving problems of land use. In 1935 the planning consultants were transferred to the Land-Use Planning Section of the Resettlement Administration. They were transferred in 1937-38 to the BAE when all land planning functions were centralized there, particularly in the Division of Land Economics.

Preliminary reports and maps from each State in the period 1934-35 were followed by additional reports in 1936 and further map revisions as late as

1939. The reports and maps were prepared according to directions given in Bulletin A-13 of the National Resources Board and in Field Instructions LU-30 and LU-35 of the Resettlement Administration. The reports focused on agricultural problem areas, areas suitable for closer settlement, and areas being occupied and settled in the period 1930-35. Copies of the reports were kept on file by the Land Classification Section and are now among the textual records of the Division of Land Economics. (See National Archives Preliminary Inventory No. 104, *Records of the Bureau of Agricultural Economics*, entry 171.)

Many of the maps are keyed to area-by-area descriptions in the textual reports. In the case of the problem area maps, information about specific areas shown can be found only by consulting the reports; however, with one or two exceptions, the distribution of types of problems can be discerned from the maps. Maps giving supplemental information about physical conditions and land use are often included. The bound textual reports often contain additional maps, not described separately here.

The maps are listed alphabetically by State in appendix III. Preliminary national problem area maps created in an attempt to synthesize the information given on the State maps are described in entry 100.

100. Maps of the United States compiled from reports of State land planning consultants showing areas of recommended changes in land utilization.

1935. 11 items. Based on early reports of land planning consultants appointed in each State in 1934 to inventory problem areas and to recommend adjustments in land use. (See entry 99.) These maps

are noted as preliminary and subject to revision. Several of the maps apparently were prepared by C. P. Barnes in January and February of 1935 before he left the BAE staff to join the Resettlement Administration.

Included are maps showing principal areas reported suitable for new or closer settlement and the types of clearing or reclamation required for such settlement; areas suitable for continued occupancy but in need of drainage, flood control, or water supply; areas in which 20 percent or more of the farms should be larger to provide adequate family living and soil maintenance; areas in which erosion should be checked by changes in farm practices rather than in farm sizes; locations of distressed irrigation or drainage districts needing financial help; areas where improved management of forest land would aid agriculture; and areas in which some farmland should be withdrawn and put to other uses.

101. Maps of the United States showing boundaries of land use problem regions.

1935. 3 items. Two photoprocessed versions and a duplicate map showing the following defined as having similar problems of poor farmland: Lake States, Atlantic and Gulf coast, and western cutover regions and the dry land farming, ranching, rolling Gulf Coastal Plain and old plantations, northern Appalachian, and southern Appalachian-Ozark regions.

102. "Land-Use Adjustment Areas Map of the United States."

1940. 4 items. Manuscript, preliminary editions, and published copies of a map that was intended to be a guide to general land use planning for public agencies in the interests of conservation, effective use of resources, and farm income. Its use, however, was minimal since the land use planning program was largely discontinued during the early 1940's.

The map was derived from the BAE's previous work in mapping natural land use areas and types of farming regions, from problem area maps compiled by State land use planning specialists, and from intensive local land classification analyses. It was revised in BAE field offices.

The following adjustments are recommended on the map: (1) internal farm adjustment, (2) minor farm reorganization, (3) major farm reorganization,

(4) irrigation adjustment, (5) grazing-farming reorganization, (6) grazing adjustment, (7) forest-farming reorganization, (8) forest adjustment, and (9) rural-urban adjustment. Included is a description of the map. The background and preparation of the map are explained in the Report of the Chief of the Bureau, 1940.

103. Published map of the proposed Great Smoky Mountains National Park annotated to show submarginal land recommended for Government purchase.

ca. 1931. 1 item.

104. Maps of Fergus County, Mont.

ca. 1936. 23 items. The maps were prepared by the Montana Agricultural Experiment Station and the Montana land use planning specialist and were kept on file by C. R. Gardell of the Land Utilization Program. Some of the Maps were used by C. P. Barnes in "Land Use Planning Publication No. 6," which was concerned with the use of aerial photography in land classification.

The following subjects are mapped: suggested land use; land classification; yield per acre and acreage of wheat by townships, 1928-35; number of farms and average wheat production per farm by townships; precipitation; idle cropland; acreage of summer fallow land; location, size, and income factors of farms and ranches, 1928-32; farms producing less than 1,000, 1,000-2,000, and over 2,000 bushels of wheat per year, 1928-35; gross income per farm; landownership patterns; location of cooperative grazing districts; status of tax delinquency and mortgage indebtedness; public utilities; population distribution by age groups; and land use adjustment areas. In addition there are illustrations showing procedures for making a township map and a map showing detailed land use in 6 square miles of the county.

105. Land classification maps of the White Butte-Bison area of Perkins County, S. Dak.

ca. 1936-37. 12 items. A series of large-scale maps compiled in the Resettlement Administration covering six townships that comprised the bulk of a land utilization project area. The maps apparently were used as experimental or demonstration maps in land classification and are labeled "Six selected

townships in the Great Plains." Shown in detail are such subjects as the pattern, acreage, and type of operating units, operating units of adequate and inadequate size, number of owners per operating unit, locations of schools, towns, and churches, occupied and unoccupied farmsteads, and recommended use for croplands.

- 106.** Bound folio of maps entitled "A Land Classification of Seward County, Kansas, June, 1939."

1939. 1 item. A series of 11 manuscript maps showing houses, kinds of ownership and sizes of operating units, average valuation and tax per acre, real estate loans, types of farming, Government loans and benefits, land types and slopes, eroded lands, quality of farmland, and existing and projected land use.

- 107.** Land classification maps of Covington County, Miss.

1940. 3 items. Photoprocessed maps compiled to accompany a land classification report dated September 1940. County lands are shown classified according to their quality and adaptability for agriculture and also according to the recommended land use categories supplied by the County Planning Committee. (See entry 72.) Also shown are farms that were surveyed in a study by the Division of Farm Management and Costs and boundaries of all ownership tracts.

- 108.** Quadrangle maps showing land use in Rhea County, Tenn.

1936. 1 item. A mosaic of 15 photocopies of quadrangles originally prepared by the Land Classification Section of the Tennessee Valley Authority showing land use, soil conditions, sizes of fields, quality of land for farming, and trade areas of towns. Included are adjacent parts of Meigs, Hamilton, Bledsloe, Cumberland, and Roane Counties.

- 109.** Numbered map collection.

1927-37. 130 items. An incomplete set of published, manuscript, and annotated maps accumu-

lated by the Land Classification Unit while it was a part of the Resettlement Administration; a few of the maps were added to the files after the unit became a section of the Division of Land Economics in 1937. Although some of the maps were created in the Land Utilization Division of the Resettlement Administration, most are reference maps published by other Federal and State agencies. A few are duplicate copies of maps described elsewhere in this list. Gaps in the numbering sequence suggest that these maps are the only records remaining of what was probably a more extensive file.

Arranged by an alpha-numeric designation under the following categories: (A) problem areas in need of adjustment, (C) forest and vegetation cover, (D) soil and physical landscape features, (E) land-ownership, (H) base maps, (I) crop yield, (J) land use classification, and (M) physical and cultural regions of the United States. A list of the maps, including the source and date of preparation for each, appears in appendix IV.

- 110.** Miscellaneous land classification maps.

1936-37. 5 items. Photoprocessed and annotated land classification maps prepared in the headquarters of Regions IV and V of the Resettlement Administration by representatives of the Land-Use Planning Section. Included are the following: a map of Alachua and Gilchrist Counties, Fla., showing land classified according to type of land use problem (see entry 111), a similar land classification map of Georgia annotated with the title "Exhibit No. 1" and with the boundaries of nine railroad districts as of 1937, economic land classification maps of Harnett County and the Albemarle Pamlico Peninsula, N.C. (including the counties of Beaufort, Dare, Hyde, Tyrell, and Washington), and a map of Meigs County, Tenn., showing land classification and forest cover.

- 111.** Key to land classification maps in entries 74, 109 (J-series), and 110.

ca. 1936. 1 item. A list prepared in Region V of the Resettlement Administration describing in detail the seven categories used in a series of maps that classify land "according to type of land use problem" for the States of Alabama, Florida (and parts thereof), Georgia, and South Carolina.

Land Utilization Section

A Land Resources and Utilization Section was created in the Division of Land Economics soon after its establishment in 1919. Oliver E. Baker, formerly in charge of the geographic work of the Office of Farm Management's Division of Agricultural History and Geography, headed the section from the early 1920's apparently to the mid-1930's. Subjects of investigation included the rate and direction of agricultural expansion, the distribution of land among crops, pasture, and forests, and the relationships of these land uses to soils and physical conditions. Work was also continued on the *Atlas of American Agriculture*, which had been started under the Office of Farm Management. In the late 1930's the section consisted of only two or three staff members.

In 1937 a Land Classification Unit was transferred from the Resettlement Administration and became a separate section in the Division of Land Economics. The records indicate that in the summer of 1941 this Land Classification Section was abolished and its personnel merged with those of the Land Resources and Utilization Section to form a new and enlarged Land Utilization Section. The new section was at first headed by J. J. Haggerty (former head of the Land Classification Section) and after World War II by Hugh H. Wooten. Area analysis, research, and mapping continued in the section until 1953 when the BAE was abolished.

The maps under this section are arranged in three categories: general records, the records of Oliver E. Baker, and the records of Francis J. Marschner. Baker, the head of the section, and Marschner, a member of the section and also the chief cartographer for the Division of Land Economics, either compiled or originated the maps grouped under their respective names.

General Records

112. Map entitled "Adjustment Areas and Subregions—Southern States."

1942. 1 item. A photoprocessed map, with minor annotations, covering the Southeast and South Central States. Subregionalization by type of farming area is shown and indexed in the margins. Compiled in connection with a report by Wilhelm Anderson (December 1941) on subregions and resources of the Southeast used by the Southeast Regional Planning Commission of the National Resources Board in its efforts to prepare a regional development plan.

113. Published map of Oklahoma showing lands influenced by mineral development.

ca. 1942. 1 item. Shows zones of operations, development, and influence of petroleum and other subsurface minerals.

114. Maps of Nevada showing vegetation types, irrigated lands, and watering places.

n.d. 2 items. Two large-scale manuscript maps of Nevada, undated but on 1922 base maps, one showing irrigated lands, irrigable lands, and various types of vegetation, and the other showing "water appropriations as recorded in the State Engineer's

Office," including irrigated lands and numerous watering places for livestock.

115. Maps related to studies of rural zoning and land utilization in Wisconsin.

ca. 1940. 4 items. Included are a photoprocessed map showing zoning districts in northern counties, published maps showing zoning districts in Bayfield County and in the town of Lake, and a map showing parks in Milwaukee County.

116. Maps of the San Jacinto watershed, Texas, compiled for a land use study.

ca. 1941. 7 items. Photoprocessed and published maps showing land use, soils, soil capabilities, size of landholdings, and names of landholders. The watershed comprises parts of Montgomery, Walker, San Jacinto, Liberty, Grimes, and Waller Counties.

117. Graphic records of a study of the Portland, Oreg., rural-urban fringe.

1941. 2 items. The study was prepared by Frederick Arpke and Baker of the Western regional office. Included are an annotated base map of Portland (without explanation but probably used as a

worksheet in the compilation of a map showing platted subdivisions in the urban area) and a chart showing numbers of acres platted in the Portland "rurban" area by years from 1885 to 1940. From this study Arpke published an article entitled "Land Use Control in the Urban Fringe of Portland, Oregon" in the *Journal of Land and Public Utilities Economics* (November 1942).

118. Miscellaneous maps showing forest areas and cleared land.

1899-1942. 6 items. Included are an undated map of the Indian Territory (Oklahoma) showing the distribution of woodland copied from a published map accompanying the 21st Annual Report of the U.S. Geological Survey in 1899; a 1927 manuscript map of Wisconsin showing forest types, prairies, and swamplands; a 1940 published Forest Service map of North Carolina entitled "Major Forest Types" retained in the library of the Division of Land Economics; an undated manuscript map of North Carolina showing the percentage of cleared land by townships; a forest cover map of northern Alabama, ca. 1940, annotated to show the distribution of "gray" and "red" land in relation to forest distri-

bution in the area north of the Tennessee River; a 1942 manuscript map of New England showing forest regions, apparently copied from a map compiled by the Society of American Foresters; and a manuscript map of Wayne County, Mo., showing the distribution of cleared and tree-covered lands in 1940, prepared by the Office of Forest Supervisor, Clark National Forest.

119. Geological and miscellaneous reference maps published by State agencies.

1876-1940. 67 items. State and county maps showing geological and geomorphic features, soils, forest types, and miscellaneous land use information. Prepared chiefly by State geological surveys and agricultural colleges. Many of the maps were published during the period 1895-1921, and some were probably accumulated in the Office of Farm Management before they were transferred to the BAE in 1922. The earliest map in the series is a 12-sheet map of Wisconsin published in 1876 by the Wisconsin Geological Survey, which includes five large-scale sheets devoted to the State's lead region. The maps are listed in appendix V by subject and thereunder alphabetically by State.

Records of Oliver E. Baker

Oliver E. Baker, the early head of the Land Resources and Utilization Section, brought the study of regional agricultural geography and land utilization from the University of Wisconsin to the Office of Farm Management and Farm Economics and subsequently to the Division of Land Economics in the BAE. He planned, edited, and contributed to the *Geography of the World's Agriculture* (1917), the *Atlas of American Agriculture* (1918-36), a series of "Graphic Summaries" of agricultural information (1915-21 and 1931-39) based on censuses of agriculture, and numerous articles in the *Yearbook of Agriculture*, all published by the Department of Agriculture. His articles also appeared in such publications as the *Geographical Review* and *Economic Geography*.

During the 1930's Baker's interest in rural population problems grew, and the records indicate that by 1939 he was a ranking member of the Division of Farm Population and Rural Welfare. He also served as president of the Association of American Geographers in 1932, and in 1942 he founded the geography department at the University of Maryland. [See S. S. Visser and Charles Y. Hu, "Oliver Edwin Baker, 1883-1949," *Annals of the Association of American Geographers*, 40:328-334 (December 1950).]

Many of the following are small-scale dot maps of the United States prepared in connection with the various "Graphic Summaries" of American agriculture published during the mid-1930's. Published copies of several of the "Graphic Summaries" are filed among the cartographic records of the Office of the Secretary of Agriculture, Record Group 16.

Earlier cartographic records of Baker are described in this list among the records of the Division of Agricultural History and Geography of the Office of Farm Management (entries 5-32).

120. Map showing agricultural regions of North America.

n.d. 1 item. An untitled manuscript map of the United States (scale ca. 1:3,000,000) showing regions described by Baker in a series of articles entitled "Agricultural Regions of North America" that appeared in *Economic Geography* from 1926 to 1931. Shown are boundaries of 12 regions, including the northern Pacific hay and forest, the grazing and irrigated crops, and the hard winter wheat regions, the humid subtropical crops belt, and the Cotton and Hay and Dairy Belts. The map includes a dot pattern showing croplands in use and lying fallow and differentiates by colors the carrying capacities of pasturelands and types of forests. It represents an early attempt to show the regionalization of American agriculture; later maps are described in entry 56.

121. Maps of the United States relating to crops and livestock, 1919-35.

1936-37. 123 items. Small-scale, photoprocessed dot maps on which county boundaries are not shown. A few of the maps refer to the period 1909-19. The variety of crops and animals is more complete than in the earlier maps described in entry 19, and information concerning distributional changes over time is often provided. Two graphs showing selected corn and wheat yields, 1866-1935, are included. Arranged alphabetically under two categories, crops and livestock. A list of the subjects and dates covered appears in appendix VI.

122. Maps of the United States showing the distribution of livestock products in 1929 and related data.

1936-37. 16 items. Photoprocessed dot maps. The 1929 distributions of the following products are shown: butter made and sold on farms, cream sold, eggs produced and sold, honey produced on farms, milk sold, mohair and wool produced, and calfskins and cattle hides sold by farmers. In addition, there are maps showing areas increasing and decreasing in butter production, 1929-34, areas decreasing in milk production, 1919-29, and areas increasing and decreasing in milk production, 1929-34. For earlier maps relating to dairy products, see entry 20.

123. Maps of the United States showing forest and nursery production on farms in 1929.

1936. 6 items. Photoprocessed dot maps showing the distribution of fenceposts, pulpwood, firewood, and saw and veneer logs cut on farms; receipts from sale of nursery stock, seeds, and bulbs; and receipts from sale of flowers, plants, and vegetables grown under glass.

124. Photoprocessed dot maps of the United States showing the distribution of persons engaged in agriculture and manufacturing in 1930.

1937. 2 items.

125. Maps of the United States showing changes in farm population, 1920-25 and 1930-35.

1929-36. 4 items. A manuscript dot map compiled in 1929 showing by counties the distribution of areas decreasing in farm population from 1920 to 1925 and three small-scale, photoprocessed dot maps compiled in 1936 showing the distribution of farm population in 1935 and areas increasing and decreasing in farm population from 1930 to 1935.

126. Photoprocessed dot maps of the United States showing the distribution of Negro and white farm populations in 1935.

ca. 1936. 2 items.

127. Maps of the United States showing the distribution of farms in 1930 and 1935 by farm size.

1935-37. 12 items. Photoprocessed dot maps. Separate maps for 1930 show the following farm sizes by acres: less than 50, 50-99, 100-259, and 260 and over; for 1935: less than 20, 20-49, 50-99, 100-174, 175-259, 260-499, 500-999, and 1,000 and over.

128. Photoprocessed dot maps of the United States showing areas increasing and decreasing in numbers of farms, 1910-20 and 1930-35.

n.d. 4 items.

129. Maps of the United States showing areas increasing and decreasing in numbers of farms, 1920-35, by farm size.

1936-37. 20 items. Photoprocessed dot maps. Separate maps for the 1920-30 period show the following farm sizes by acres: less than 50, 50-99, 100-259, and 260 and over; for the 1930-35 period: less than 20, 20-49, less than 50, 50-99, 100-259, and 260 and over.

130. Maps of the United States showing areas increasing and decreasing in farm acreage, 1920-35.

1936. 5 items. Photoprocessed dot maps. Separate maps cover the periods 1920-30 and 1930-35. Also included is a small panel of two maps of the eastern part of the United States showing areas increasing and decreasing in acreage of agricultural lands in originally forested counties, 1929-34.

131. Maps of the United States showing changes in acreage of cropland harvested.

1935-36. 3 items. Photoprocessed dot maps showing areas decreasing in acreage of cropland harvested, 1909-19, and areas increasing and decreasing in acreage of cropland harvested on farms of 260 acres and over, 1924-29.

132. Maps of the United States showing types of land use on farms.

1936. 5 items. Photoprocessed dot maps showing the acreage distribution of all land in farms, land available for crops, land in harvested crops, pastureland in farms, and woodland pasture in farms. Based on 1929-35 data.

133. Photoprocessed dot maps of the United States showing acreage of farm pasture unsuitable for crops and in rotation with crops in 1929.

1935. 2 items.

134. Photoprocessed maps of the United States showing types of farms in 1930.

1934-35. 17 items. One map shows the regional distribution of the most important types of farms. A series of small-scale dot maps shows the distribution

of part-time, self-sufficient, general, cash-grain, crop-specialty, fruit, truck, poultry, dairy, cotton, boarding and lodging, and forest-product farms and the distribution of stock ranches and rural institutions or country estates.

135. Maps of the United States showing distribution of farms with tractors, automobiles, and other modern facilities.

1936-38. 13 items. A series of photoprocessed dot maps showing tractors on farms in 1938 and areas with increased numbers of tractors from 1920 to 1930 and from 1930 to 1938, automobiles on farms in 1930 and areas with increased numbers of automobiles from 1920 to 1930, and the distribution of farms with motortrucks, electricity, piped water, telephones, machinery, powerplants, and electric motors in 1930. See also entry 11.

136. Maps of the United States showing kinds of roads serving farms in 1930.

ca. 1935. 6 items. Photoprocessed dot maps showing the distribution of farms on unimproved and improved dirt roads, sand-clay, gravel, macadam, and concrete, brick, or asphalt roads.

137. Photoprocessed maps of the United States showing distribution of farmlands with artificial drainage and lands in drainage enterprises in 1930.

1935-36. 2 items.

138. Photoprocessed dot map of the United States showing areas increasing in acreage of irrigated land, 1919-29.

1936. 1 item.

139. Photoprocessed map of the United States showing average fall precipitation in inches.

1936. 1 item. The years on which the map is based are not given.

140. Maps of the United States showing cropland lying idle or fallow.

1935-36. 4 items. Photoprocessed dot maps showing the distribution of idle land in 1929 and

1934 and areas increasing and decreasing in idle land between those dates.

141. Photoprocessed dot map of the United States showing the extent of crop failure in 1934.

1936. 1 item.

142. Photoprocessed dot map of the United States showing the distribution of unoccupied farm dwellings in 1935.

1937. 1 item.

143. Maps of the United States showing the distribution of Government benefits to farmers, 1930-37.

n.d. 3 items. Photoprocessed dot maps showing Agricultural Adjustment Administration conservation payments to farmers in 1936-37 and rural rehabilitation loans and grants to individuals in 1930.

144. Maps of the United States relating to farm labor.

1936. 10 items. Photoprocessed dot maps showing the 1930 distribution of males and females engaged in agriculture, all farm laborers, farm laborers paid wages, unpaid male family workers, and cash expenditures for farm labor. In addition there are maps showing the distribution of farmers hiring labor in 1919 and 1929 and areas increasing and decreasing in hired labor between those dates.

145. Maps of the United States relating to farm tenancy and ownership.

1936. 16 items. Photoprocessed dot maps showing the distribution of farms operated by tenants, sharecroppers, full owners, and part owners in 1935; areas increasing and decreasing in each type, 1910-20, 1920-30, and 1930-35; the acreages of cropland harvested and crop failure on farms of each type, 1934; farms operated by tenants paying cash rent and paying share rent in 1930; and the percentage of farmers residing less than 1 year on the same farm in 1935. Also included are a small-scale map of the United States listing by State and by region the number of tenant farmers as a percentage of all farmers decennially from 1880 to 1935 and a dot map of the Southeastern United States, including the Border States, showing farms operated by tenants (other than sharecroppers) in 1935.

146. Maps of the United States relating to value of farm products sold and to farm expenditures and debts.

1934-37. 15 items. Photoprocessed dot maps. Shown are the distribution of the total value of products sold or traded from farms in 1929, the distribution of farms reported as selling or trading in 1929 a total value of products of less than \$250, \$250-\$400, \$400-\$600, \$600-\$1,000, \$1,000-\$1,500, \$1,500-\$2,500, and \$4,000 and over, the value of farm products used by operators' families, expenditures by farms for implements and machinery, feed, and light and power in 1929, and areas increasing and decreasing in mortgage debt on full owner farms, 1920-30.

Records of Francis J. Marschner

Many of the cartographic records of the Land Utilization Section reflect the work of Francis J. Marschner, an agricultural economist, geographer, chief cartographic draftsman for the Division of Land Economics for nearly its entire history, and former vice president of the Association of American Geographers. Marschner immigrated from Austria in 1915 and immediately began cartographic work with what was to become the Division of Agricultural History and Geography of the Office of Farm Management and Farm Economics. He joined the BAE when that Division became part of the Division of Land Economics in 1922.

At the Department of Agriculture Marschner became intensely involved in the cartographic phase of land utilization research, and he promoted the use and development of cartography as a tool in agricultural economics. He remained involved in land utilization research after the abolition of the BAE in 1953, continuing his work as a collaborator with the Agricultural Research Service and the Economic Research Service until his death in 1966. [See James R. Anderson, "Francis Joseph Marschner, 1882-1966," *Annals of the Association of American Geographers*, 57:635-636 (September 1967).]

All of the existing cartographic records in the National Archives that are known to have been created by Marschner while he was on the staff of the Department of Agriculture have been centralized in the records of the BAE and are described below and in entries 6-7 of this list. The maps in this section, however, represent only a portion of Marschner's cartographic work, and it is probable that a number of other unsigned maps described elsewhere in this list were drafted by or in collaboration with Marschner.

147. Soil map of the United States.

ca. 1921. 2 items. Manuscript and published versions of a map which shows 31 categories of soils and which accompanied O. E. Baker's article in the 1921 *Yearbook of Agriculture* entitled "A Graphic Summary of American Agriculture." Compiled by C. F. Marbut and associates in the Soil Survey and drafted by Marschner. Related maps are described in entry 152.

148. "Physiographic Diagram of the United States" by A. K. Lobeck.

1921. 1 item. A provisional edition published in 1921 at the University of Wisconsin at the scale of 1:3,000,000 and signed by Marschner.

149. Maps relating to studies of railroad land grants and land use in the Western States.

ca. 1920-27. 15 items. One of the maps is annotated by Marschner. (Marschner was one of several members of the Division who investigated railroad colonization and the settlement of railroad lands during the 1920's.)

The file includes a 1920 map of the United States showing railroad systems and rate zones; a series of maps showing lands granted to the Southern Pacific and Central Pacific Railroads in southern California, 1923-27, and annotated to show agricultural land use in some areas; four undated large-scale maps of parts of Montana showing lands granted to the Northern Pacific Railway and related historical information, annotated with unidentified numbers and symbols in each section and township that apparently relate to resource use; a map of Oregon dated 1904 showing land grants to the Northern Pacific Railroad, the Dalles Military Road, the Oregon Central Military Road, the Oregon and California Railroad, and others, annotated to show land use in some western and central counties and indexed with the locations of approximately 900 communities; a chart published by the Oregon Short Line Railroad showing historical variations in the level of the Great Salt Lake and precipitation in the basin monthly

from 1850 to 1915; two undated maps of northern Arizona showing landholdings of the lessees and purchasers of lands of the Santa Fe Pacific Railroad Company, the St. Louis and San Francisco Railway Company, and the Aztec Land and Cattle Company and also showing forest lands, Indian lands, and sheep driveways. In addition there is a separate description of the use of public lands shown on an Arizona-New Mexico map, which cannot be located.

150. Maps of Illinois, Indiana, Minnesota, Wisconsin, Florida, and Louisiana annotated to show natural land cover.

n.d. 6 items. Unidentified maps possibly relating to Marschner's work in mapping natural land use areas of the United States (see entry 154) or wetlands and drainage in the United States (see entry 170). Included are published General Land Office base maps annotated to show prairie, wet prairie, marsh, swamp, and, in some cases, forest types. The base maps were published between 1905 and 1916, but the annotations are not dated, and much of the information is faded and illegible. Only the northwest part of the Indiana map is annotated. The Illinois map also contains unexplained numbers at various points.

151. Maps of Arizona and New Mexico annotated to show land use.

n.d. 2 items. Two published base maps dated 1912 and 1921 and annotated by Marschner at an unspecified date to show land use and vegetation cover in some areas. Certain areas are described as having "dense brush," "rocky soil," or "good grazing," and unidentified numbers (which may represent rainfall) appear at various points. The limits of the Atlantic and Pacific Railway grant are also shown.

152. Maps drafted for the *Atlas of American Agriculture*.

1924-31. 38 items. The atlas was prepared as a series of separate sheets beginning in 1918 under the supervision of O. E. Baker, and selected maps

concerning the physical basis for agriculture were brought together in a single volume in 1936. Included among those maps Marschner drafted while he was on the staff of the BAE is a section of the atlas issued in 1924 entitled "Natural Vegetation," done in association with H. L. Shantz and Raphael Zon. This section contains a series of separate maps marked "for the correction of the U.S. Vegetation Map," along with a duplicate of the latter. Also included are two copies of the 12-sheet "Soil Map of the United States," compiled by C. F. Marbut and Marschner for publication in 1931. Maps Marschner drafted for the atlas before the establishment of the BAE are described in entry 6, and an earlier soil map related to the Marbut map appears in entry 147.

153. Manuscript maps showing population density and agricultural regions of the world.

ca. 1925. 2 items. Compiled by Marschner. The map showing agricultural regions includes such categories as nomadic herding, shifting cultivation, subsistence farming, intensive rice cultivation, and types of commercial farming.

154. Map entitled "Natural Land-Use Areas of the United States" and related records.

1933. 8 items. A published map (scale 1:4,000,000) compiled by C. P. Barnes and Marschner and showing 272 regions of the United States based on the physical characteristics of the land which influence land use. This map is one of the earliest published maps covering the entire nation and is designed to show potential land use areas. Included with several final copies are a manuscript version and several preliminary editions. Also included is an unpublished text of 272 pages describing the regions shown on the map. These descriptions appear to be expanded versions of descriptions in the margins of the map.

155. Maps relating to a study of the southern Appalachians.

1933-37. 17 items. Compiled by Marschner in connection with a study of the social, economic, and geographic factors related to land utilization in the Appalachian counties of Alabama, Georgia, Tennessee, North Carolina, Virginia, Kentucky, West Virginia, and Maryland. Included are worksheets,

tracings, negative photoprocessed copies, preliminary proofsheets, and a final published edition of a 1933 base map entitled "Topography - The Southern Appalachians." A manuscript version of the above map compiled in 1936 showing rural density per square mile by means of isolines and a photoprocessed map showing "Counties of Study in Southern Appalachians," prepared for Taylor and Dodson, are also included. A copy of the study and related documents are filed among the textual records of the BAE. (See Preliminary Inventory No. 104, *Records of the Bureau of Agricultural Economics*, entry 180.)

156. Maps showing the original vegetation of Michigan.

1935 and 1946. 4 items. Based on field notes of the General Land Office surveys of the 19th century. Included are two versions of a map entitled "Original Forests of Michigan" (but showing prairies and swamps as well as forests). One version appears to be a photoprocessed copy of a 1923 Marschner map to which colors were added by "B.O.M." in January 1935, and the other version is a photostatic copy of the same map redrawn in 1946 by A. D. Perejda, a geographer at Wayne University. Also included are an undated manuscript copy or worksheet without a descriptive legend and an annotated map of the Upper Peninsula of Michigan showing "original vegetation," published with the 1906 Annual Report of the Geological Survey of Michigan and apparently used as source material. Marschner compiled a similar map of Minnesota, but it is not included in the files.

157. Map of Louisiana showing farm types.

1937. 1 item. A small-scale, photoprocessed map showing 13 categories based on crops grown. An annotation signed by Marschner explains that a type of farm region is determined by 30 percent or more of the harvested cropland's being devoted to a crop.

158. Maps relating to use of public lands in the United States.

ca. 1935-46. 3 items. Included are an undated manuscript map showing "Public Lands Under Public Use and Indian Reservations," prepared for the National Resources Board and signed by Marschner, and two copies of a map of the United States entitled "Major Land Management Activities of Public Agencies," published in 1939 by the Department of

Agriculture, one copy of which is annotated by Marschner to show "ungrazed areas in the National Forests and adjacent lands - 1946."

State maps showing land management activities of public agencies are filed among the records of the U.S. Forest Service, Record Group 95. (See Preliminary Inventory No. 167, *Cartographic Records of the Forest Service*, entry 128.)

159. Annotated maps of New Mexico.

n.d. 4 items. Base maps of New Mexico dating from 1929 to 1943 and annotated at an unspecified date with a variety of symbols, some showing land use and elevation, some unidentified. These maps appear to be preliminary worksheets Marschner used in the preparation of maps showing land use in the State. Included is a large-scale 1943 map published by the U.S. Geological Survey entitled "A Reconnaissance and Elevation Map of Southeastern New Mexico," covering Eddy, Chaves, Lea, and parts of Roosevelt and DeBaca Counties, and showing names of residents, ranches, schools, mines, refineries, roads, railroads, and numerous spot elevations.

160. Maps showing physiographic and land use areas in the South Central United States.

ca. 1941. 9 items. Compiled by Marschner. Included are a manuscript map of the region of Texas, Oklahoma, Arkansas, and Louisiana, showing 21 subregional divisions and a set of eight published State maps annotated with red lines duplicating the subregional boundaries and apparently used in connection with the compilation of the regional map. The base maps used consist of maps of Arkansas showing topography, mineral industries, and oil and gas pipelines (1930), geology (1929), and soil erosion reconnaissance (1934), maps of Oklahoma showing physiographic regions (1912), soil areas (n.d.), and forest types (1940), and maps of Missouri showing erosion (1935) and geology (1939).

161. Map of the natural land use regions of Arkansas.

ca. 1941. 2 items. Compiled by Marschner. A published map in which types of farming are shown for each of several physiographic provinces. Included is a published map with a description of the surface

and subsurface geology of Arkansas, which Marschner apparently used for reference.

162. *Atlas of Agricultural Information—Appalachian Region.*

1942. 2 items. A first edition prepared by the Regional Interbureau Committee on Postwar Planning to which the BAE was major contributor. Contains tables and small-scale maps of the region consisting of Kentucky, North Carolina, Tennessee, Virginia, and West Virginia, showing agricultural geography and rural economy in the period 1939-42. Most of the material is organized according to nine physiographic provinces and 45 further subdivisions called resource areas, intermediate between State and county; in some cases information is shown by county.

Subjects shown on the maps include soil groups, erosion, growing seasons, drainage basin boundaries, forest types and cover, oil- and gasfields, coalfields, hydroelectric plants, arable land, population/cropland ratio, tractor power used, road and rail nets, value added by manufacturing, value of farm products, farm income, types and density of employment, underemployment, tenant and sharecropper farm areas, changes in population (1940-42), education levels, hospitals and physicians, vocational schools, production credit associations, recreational areas, farm relief measures (including Farm Security Administration borrowers and services, Agricultural Adjustment Administration payments, Farm Credit Administration loans, and food distribution and food stamp programs), and field activities of the Rural Electrification Administration and the Tennessee Valley Authority.

Subjects included in the tables are numbers of farms, land use acreages, abandoned farms and reasons for abandonment, wholesale and retail trade, types and numbers of industries, types of employment, growth of population from 1840, average conditions of dwelling units, percentages of farms having automobiles, electricity, and telephones, percentages of farms adjacent to roads, and food expenditures.

Also included is a separate manuscript map showing a version of the resource areas boundary map; this may represent the preliminary aerial pattern developed by Marschner that was used as a guide in the presentation of material in the atlas.

163. Map entitled "Livelihood Areas of the United States."

1943. 1 item. A published map (scale 1:7,500,000) Marschner prepared to accompany a publication of the National Resources Planning Board entitled *Area Analysis—A Method of Public Works Planning* (Technical Paper No. 6, revised) by Charles C. Colby and Victor Roterus. The map shows 235 numbered regions of the United States based on an experimental method of economic area analysis described in the technical paper. The regions are listed in the margins and keyed to the map. A copy of the paper with an attached copy of the map is filed among the cartographic records of the National Resources Planning Board, Record Group 187.

164. Maps showing the seasonal use of grazing lands in the western range.

1905 and 1947. 3 items. A manuscript map of the Western States prepared by Marschner in 1947, with a smaller worksheet showing only Nevada, and a large-scale published map of the Western States in color, compiled by Albert F. Potter of the Bureau of Forestry in 1905, and annotated and used by Marschner as source material. The 1905 map includes information about grazing lands either dependent on tank water and snow or developed by wells and windmills. A later published version of the 1947 map was included in a publication by Marschner entitled *Land Use and Its Patterns in the United States*, 1959. (See entry 169).

165. Map entitled "Major Land Uses of the United States" and related worksheets.

1947-58. 17 items. Compiled by Marschner. Originally published in 1950 at a scale of 1:5,000,000, the map shows types of pasture, forests, drylands, irrigated lands, swamps, and marshlands by means of colors and the distribution of croplands (based on the 1945 Census of Agriculture) by the dot method, with each dot representing 10,000 acres.

Included are a base map, worksheets on tracing paper, a manuscript version, proofsheets, several preliminary editions, a copy of the published map, and a 1958 reprint used by the Agricultural Research Service as a sheet of the *National Atlas of the United States*. The map was generalized from a series of State maps described in entry 166 of this list.

A forerunner of the map, also compiled by Marschner, entitled "Major Land Use Areas, Western United States" (1948) appears in published form in *Irrigation Agriculture in the West* (Department of Agriculture Miscellaneous Publication No. 670), filed among the cartographic records of the Office of the Secretary of Agriculture, Record Group 16.

166. Manuscript State maps used in the compilation of "Major Land Uses of the United States."

1947-50. 36 items. Based on early aerial photo index sheets (the earliest of which dated from the late 1930's) and used by Marschner as an intermediate step in the preparation of the national map described in entry 165. These maps provide a detailed record of land use patterns in the various States; the detail in mapping is greater than on the national map, which required a degree of generalization. The maps were prepared at a scale of 1:1,000,000 and cover all contiguous States except the following: Arizona, California, Colorado, Georgia, Idaho, Louisiana, Montana, Nevada, Oregon, and Washington. The New Mexico, Utah, and Wyoming maps are unfinished and show very little information.

The maps are arranged alphabetically by State; Vermont is combined with New Hampshire, New Jersey with Pennsylvania, Delaware with Maryland, and Connecticut and Rhode Island with Massachusetts. The following is a summation of the land use symbols appearing on various maps: A, A-1, or diagonal lines—cropland (over 60 percent crops), AB—crops and grazing (less than 30 percent crops), 1—crops and grazing (30-60 percent crops), 2—cropland, woodland, and pasture, 2-A—mostly cropland with some pasture and woodland, 2-B—mostly woodland with some scattered farms or grazing (less than 30 percent crops), 4—swamp or wet bottom forest, 6—mostly grazing (less than 30 percent crops), 7—open woodland used for grazing, F—forest, Gr—grazing land, M—marsh, Pr—prairie, and W—woodland.

167. Map of the United States entitled "Major Land Use Regions."

1950. 1 item. Compiled by Marschner. A photoprocessed copy of a map prepared concurrently with Marschner's map of "Major Land Uses of the United States" (see entry 165), but on which the land use information is generalized into 34 regions in a

readily reproducible black-and-white pattern. Copies of the map appeared in several publications, including a "Graphic Summary" of agriculture for 1950 prepared in cooperation with the Bureau of the Census.

168. Maps showing generalized land resource areas of the United States.

ca. 1953. 5 items. Compiled by Marschner at a scale of 1:7,500,000. Included are manuscript, worksheet, and revised manuscript copies of a map prepared for publication. Shown are relief and soil areas favorable or unfavorable for crops; the distribution of swamps and marshes, deserts, arid areas with forage and with stock water, and principal irrigated areas; and isopleth lines connecting points having an annual average of 140, 200, and 260 frost-free days. A slightly differing, small-scale version of the map accompanied an article by Marschner and C. P. Barnes entitled "Our Wealth of Land Resources," published in the 1958 Yearbook of the Department of Agriculture.

169. Manuscript maps used in preparation of Marschner's *Land Use and Its Patterns in the United States* (Agricultural Handbook No. 153, 1959).

ca. 1948-59. 25 items. Marschner compiled or drafted most of the maps. A description of the maps appears in appendix VII, and another map used in the book is described in entry 164.

170. Records relating to wetlands and drainage.

1915-45. 10 items. Marschner at several times in his career (1922-24 and ca. 1943) investigated the reclamation and settlement potential of wetlands, especially in cooperation with L. A. Jones of the Bureau of Agricultural Engineering (later the Soil Conservation Service). Records accumulated include the following: lists prepared in 1922-24 relating to wet, swampy, and overflowed land in the United States and showing acreages by States of areas unfit for cultivation without drainage improvements, areas in need of drainage, and areas of tidal marsh and coastal beach; similar lists relating to wetlands in Virginia showing by county and by resource area the acreages of farm drainage needed, community drainage needed, and lands where drainage is not economically feasible; a blueprint map of the Dismal Swamp district in North Carolina, dated 1916, showing drained lands; a map showing drainage surveys of

lands ceded to the Chippewa Indians in northern Minnesota conducted by the U.S. Geological Survey in 1907-08, annotated to show "peat" and "openings" and marked "House Document 27, 61st Congress, First Session"; a map dated 1941 and prepared by the Arkansas Flood Control Commission showing the drainage system of southeast Arkansas and on which Chicot County is annotated with unidentified lines that appear to be relief contours; and a map dated 1945 showing wetlands and drainage possibilities in North Carolina.

171. Selected aerial photographs.

1936-46. 17 items. A series of aerial photographs of various places of the country taken by the U.S. Geological Survey and other agencies but unidentified as to their use or significance. Because several of the photographs are similar to certain photographs used to illustrate land use patterns in Marschner's book, *Land Use and Its Patterns in the United States* (see entry 169), these may be photographs that were rejected for that purpose.

172. Miscellaneous maps compiled or drafted by Marschner.

1917-57. 18 items. Included are manuscript and published copies of a base map intended to show "life zones" in New Mexico, drafted in 1917 for studies by Vernon Bailey of the Biological Survey but not completed; an undated manuscript topographic map of western Maryland and several photographic copies; an undated manuscript topographic map of northwestern Colorado and two contour versions of a map used as a base; manuscript base maps of Lander, Eureka, and Pershing Counties, Nev., compiled in 1928 and showing names of ranches, residents, and mines and township and section lines; an undated manuscript map on tracing cloth of the vicinity of London, Laurel County, Ky., showing roads and topography; an undated map of part of Leslie County, Ky., showing locations of houses, traced from the Buckhorn quadrangle; manuscript, worksheet, and photographic negative versions of a base map of the United States showing State boundaries and drainage patterns; and a photoprocessed map of the United States showing 34 categories of land use, along with a sketch map showing dry farming areas of the United States, both of which accompanied a 1957 letter to Paul Ellsworth explaining the distribution of dry farming and pump irrigation in the High Plains of Texas (see also entry 169, map 20).

173. Miscellaneous cartographic material used by Marschner.

n.d. 3 items. Included are manuscript and photoprocessed copies of five pages of tabulations entitled "Areas of Quadrilaterals of the Earth's Surface of Five Minutes Extent in Latitude and

Longitude," compiled by Marschner for a 1929 article, "The Need for Revising the Areal Figures of the United States by Counties," a copy of which is among the BAE's textual records. Also included is a transparent overlay disk meter showing square inches in circular form.

Public Finance Section

The Public Finance Section, originally established as a unit of the Land Policy Section of the Agricultural Adjustment Administration, was transferred to the Resettlement Administration and subsequently to the BAE. Its work involved studying the problems of tax delinquency, negotiating agreements for payments in lieu of taxes, and analyzing the effect of Federal acquisition of land on local government.

174. Manuscript map of the United States showing counties in which payments were made in lieu of taxes on Farm Security Administration

property in 1942.

ca. 1942. 1 item.

Water Utilization Section

In 1937 responsibility for research and planning in connection with the efficient use of water facilities in the arid Western States was assigned to the Division of Land Economics. The work was done in conjunction with the Office of Land Use Coordination, the Soil Conservation Service, and the Farm Security Administration. Expenditures for the water facilities program were greatly reduced at the onset of World War II.

A number of maps are interfiled among the textual records of the Water Utilization Section and are not described separately here.

175. Manuscript map of the United States showing approved water facilities and flood control survey areas.

1939. 1 item.

176. Map of the South Central States showing the status of water planning operations.

1939. 1 item. A photoprocessed map of Texas, Oklahoma, Kansas, Colorado, and New Mexico showing the locations of watersheds and showing subareas being investigated or planned for investigation as of September 1939, originally compiled in the Amarillo Field Office to accompany a water facilities monthly report. The map is annotated to show areas where investigations had been completed and "demonstration counties."

177. Published map showing major drainage basins of the Western United States.

ca. 1940. 1 item.

178. Published map showing surface water discharge characteristics in the major drainage basins of the 17 Western States.

ca. 1940. 1 item. Information is given at one or more stations along each river. Shown are the maximum, mean, and minimum discharge in acre-feet of water for various numbers of years and monthly percentages of average annual discharge for each river.

179. Panel of two maps of the 17 Western States showing surface water and ground water irrigation areas.

n.d. 1 item. Rising and falling water table areas are differentiated on the ground water map.

180. Manuscript maps relating to water supply in the 17 Western States.

ca. 1943. 12 items. Information is plotted on 1943 published base maps that indicate boundaries of natural surface water supply areas. Included are maps showing total and average water delivered for irrigation in 1939 in acre-feet, surface water and ground water irrigation areas, irrigation requirements for profitable farming, status of interstate water compacts, average warm season precipitation, 1899-1938, average frost-free growing period, and generalized soil groups. Also included are two unfinished maps showing average annual runoff per square mile and net increment to streamflow by natural areas and a reference copy of "Soil Associations of the United States," a map drafted in 1938 by Robert Turnure and published by the Bureau of Chemistry and Soils.

181. Preliminary maps used in the publication of a revised surface water supply areas map.

1944. 5 items. Included are large-scale manuscript versions of a map showing boundaries of major and minor water supply areas in the 17 Western States, prepared on tracing cloth for publication, and manuscript and published versions of accompanying base maps showing counties and rivers.

182. Manuscript and photoprocessed maps relating to water facilities plans in the Western States.

1937-43. 75 items. Maps of watersheds and related areas prepared for water facilities area plans. Most of the maps apparently were intended for publication; the published maps described in entry 183 duplicate the information shown on some of these maps. Subjects shown include water and irrigation facilities, land use, landownership patterns, precipitation, and hydrology, but coverage is incomplete for most of the watersheds. Most of the maps relating to California also appear in the records of Region 7. (See entry 291.) A list of the areas and subjects shown appears in appendix VIII.

183. Published maps and graphs relating to water facilities plans in the Western States.

1939-42. 500 items. These maps are the cartographic portion of water facilities plans for drainage basins. (The plans also include textual and tabular material.) The maps consist of small-scale published

sheets filed in one Acco binder with an accompanying location index. Typical items relating to a single drainage basin include: an index map showing the location of the basin within one or more counties; a map showing existing water facilities, such as irrigation canals, wells, pumping plants, windmills, stock tanks, pipelines, and existing and proposed reservoirs; graphs showing average temperature and precipitation; a map showing landownership patterns; and a map showing existing land use and proposed land use contingent on successful irrigation programs. Also included for a number of the drainage basins are maps and graphs relating to hydrology, soils, types of farming, land classification, vegetation cover, topography, and plans for future dams.

Listed under "Water-Land Resources and Problems in South Dakota" are 15 maps and charts dated 1940 covering the entire State and showing precipitation, land utilization areas, ground water information, stream runoff and measuring stations, irrigation facilities, and areas with adequate range livestock water facilities.

The maps are arranged alphabetically by State and thereunder by name of drainage basin or area. Appendix IX lists the subjects covered. Related manuscript, photoprocessed, and annotated maps are described in entries 182 and 291.

184. Map of Missouri showing existing and proposed reservoirs and stream gaging stations.

1940. 1 item. Published by the Missouri Geological Survey and Water Resources.

185. Manuscript map showing artesian areas in east Texas.

1942. 1 item.

186. Published maps showing land classification in the Great Plains.

1925-29. 11 items. An incomplete set of land use maps of the northern and central Great Plains, northwest and southwest Colorado, and southwest Wyoming, published by the Geological Survey and intended for an atlas of the Great Plains begun by the Division of Land Economics. This set was retained by the Water Utilization Section; other sets are described in entries 84 and 109 (part J).

Flood Control Section

In 1937 the Division of Land Economics' Flood Control Section assumed responsibility for the research and planning phase of the program established by the Flood Control Acts of 1936, 1937, and 1938. The Soil Conservation Service and the Forest Service implemented the program. Planning activities included an investigation of possible land use and occupancy adjustments and of other economically feasible measures to reduce flood and silt damage.

The following map is the only item in the map files of the Washington Office that is directly related to the program. A number of administrative maps and maps showing selected watersheds are interfiled among the voluminous textual records of the Flood Control Section but are not described separately here. (See Preliminary Inventory No. 104, *Records of the Bureau of Agricultural Economics*.) The cartographic records of this program accumulated in the Western regional office are described in entries 292-294 below.

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| 187. Map of the United States showing areas authorized for flood control examinations and | surveys in 1936 and 1937.
n.d. 1 item. For 1939, see entry 175. |
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LAND UTILIZATION PROGRAM

Between September 1, 1937, and October 6, 1938, the BAE administered the land utilization program of the Department of Agriculture. The program was designed to correct unsuitable land occupancy and use, farm inefficiency, poverty, and soil erosion through a series of projects involving Government purchase of submarginal farmlands and their retirement from farm use.

The land utilization program began in 1934 as a joint project of the Land Policy Section of the Agricultural Adjustment Administration's Program Planning Division and the Federal Emergency Relief Administration. In 1935 the Resettlement Administration (later called the Farm Security Administration) took over the program; administration was assigned to its Land Utilization Division, and research and planning were centered in the Land-Use Planning Section of that Division.

On September 1, 1937, by Secretary's Memorandum 733, the BAE was assigned entire responsibility for the program. The Land Utilization Division was transferred to the BAE, and its functions were divided among several divisions: the administration of projects came under the newly established Divisions of Land Acquisition, Land Development, and Project Organization, and research and planning functions and personnel of the former Land-Use Planning Section were merged with the Land Economics Division. L. C. Gray, who had been head of the Land Utilization Division of the Resettlement Administration, as well as the Chief of the Land Economics Division of the BAE since 1919, became Assistant Chief of the BAE in overall charge of the land utilization program.

On October 6, 1938, in order to centralize all conservation activities of the Department, the Secretary directed by Memorandum 785 the transfer of the land utilization program, including the field and project personnel engaged in direct contact with farmers, to the Soil Conservation Service. However, because the BAE at about the same time was reconstituted as the central planning agency of the Department, the personnel involved in planning remained with the Division of Land Economics.

A cartographic section of the Land Utilization Division under C. P. Gardell, senior draftsman, retained its separate identity as one of various units in the office of the Assistant Chief during the BAE's administration of the program. Maps drafted in this unit continued to indicate their source by the letters "L.U." before the words "Cartography, BAE." Gardell later briefly joined the Division of Land Economics before becoming an economic geographer for the Office of Foreign Agricultural Relations.

Practically all of the maps related to the land utilization program, including administrative maps and individual project maps dating from the beginning of the program, have been centralized in the Records of the Soil Conservation Service, Record Group 114. The following four maps indicate the scope of the program during its administration by the BAE. Related maps are described in this list under the Division of Land Economics, particularly among the records of the Land Classification Section.

188. Maps of the United States showing administrative regions of the land utilization program.

1938. 2 items. One undated map shows the boundaries of the old Resettlement Administration regions and the BAE regions; a second map shows regional boundaries as they existed in August 1938. (The BAE inherited its regional organization from the Resettlement Administration's Land Utilization Division, and it retained this geographic administrative structure, with modifications, after the land utiliza-

tion program was removed from its jurisdiction. See also entry 34 and the discussion under "Records of the Regional Offices.")

189. Maps of the United States showing locations of land utilization projects.

1938. 2 items. Shown are projects begun before the BAE assumed the land utilization program and projects that originated in the BAE.

Records of the Regional Offices of the BAE

The BAE inherited the regional organization of the Land Utilization Division of the Resettlement Administration when that program was transferred to the Bureau in 1937. The BAE, however, reduced the number of regions from 11 to seven. The land utilization program and other administrative activities were coordinated by Regional Directors (patterned after the Resettlement Administration) in close cooperation with the various divisions of the Bureau. On April 9, 1939, with the removal of the land utilization program from the BAE's direct administration, the Regional Directors' positions were abolished and replaced by "regional analysts," and the personnel of the regional offices acted as representatives of the various divisions.

The records indicate that after 1939 the Division of Land Economics consolidated the seven regions into four "administrative areas" to direct certain of its land programs. The Western Region (Region 7), from which most of the regional cartographic records derive, became an administrative area for these purposes with no change in boundaries. The regional offices were abolished by a memorandum of the Chief of the BAE dated June 30, 1946. Many of the regional records were authorized for disposal by the National Archives, and the only large group of cartographic records retained as a unit were the records of the Western regional office at Berkeley, Calif.

ATLANTA OFFICE (REGION 5)

The Southeastern Region was created from Regions IV and V of the Resettlement Administration and included Georgia, Alabama, Florida, North Carolina, South Carolina, Kentucky, and Tennessee, and for a time Virginia and West Virginia. Only a few of the maps prepared in this region have been located. A few land classification maps created under the old Resettlement Administration regions are described under the records of the Land Classification Section, Division of Land Economics.

190. Maps of the Southeastern Region annotated to show Department of Agriculture projects.

1938. 2 items. Prepared for the Regional Director and annotated "Exhibit 2" and "Exhibit 3." Shown are land utilization projects, Biological Survey projects, State and local land classification activities, preliminary watershed reporting activities, soil conservation districts, and Farm Security Administration areas.

191. Topographic map of the Savannah River watershed above Augusta, Ga.

1939. 1 item.

192. Map of Georgia showing historical information about counties.

1940. 2 items. Two tracings of an 1895 map showing boundaries of the earliest headright and land-lot counties. Also shown are the locations and dates of former State capitals and locations of numbered land districts in the land-lot counties. An accompanying legend gives the dates and circumstances of formation for the headright counties and the following information for the land-lot counties: numbers of inclusive districts, acres per land lot, dates of survey, dates of "lottery," and other remarks.

BERKELEY OFFICE (REGION 7)

The Western Region was formed from the Resettlement Administration's Region IX (Pacific Southwest) and Region XI (Pacific Northwest); it included the States of Oregon, Washington, Idaho, California, Nevada, Utah, and Arizona. A few records from Montana and New Mexico also appear among its files. Included among the records of the Division of Land Economics are maps created by predecessor agencies, the National Resources Board and the Land-Use Planning Section of the Resettlement Administration's Land Utilization Division.

General Records

193. Map of the Pacific Northwest showing cropland, irrigated and drained areas, and proposed land development areas.

1941. 1 item. Prepared jointly by the BAE and the National Resources Planning Board. Shown are Washington, Oregon, and Idaho.

194. Records of the Pacific Northwest Committee for postwar programs and related items.

1941-43. 8 items. The Pacific Northwest Committee was one of nine regional committees established in 1941 under the direction of the BAE to analyze agricultural conditions at the end of World War II. The records include manuscript and photo-processed maps of the Pacific Northwest Region (Washington, Oregon, and Idaho) showing administrative boundaries of the Committee, zones of permanent and temporary military influence, military reservations and war industry activities, and population shifts by county from 1940 to 1943; and manuscript maps of Oregon showing planning area boundaries, feasible irrigation and reclamation projects, and irrigation projects offering settlement opportunities for the period 1944-46. Also included are a map showing prohibited and restricted military zones along the entire west coast and a map of California showing locations in June 1941 of certain defense installations such as Army camps, flying schools, depots, and draft centers.

195. Graph showing population and income of California in the 1919-38 period expressed as percentages of the population and income of the United States.

1938. 1 item.

196. Graphs compiled for a comparative study of agricultural and economic conditions in California, other Western States, and the United States as a whole.

ca. 1944. 10 items. A set of manuscript graphs from an unidentified study numbered as follows: (1) growth of population from 1900 to 1944 and forecasted trends from 1945 to 1960 in California, 10 other Western States, and the United States, (2) per capita income in California and the United States,

1929-34, and projected levels in the United States, (3) age distribution in California in 1940 shown as a ratio comparison with that of the United States, (4) and (5) acreages of types of agricultural land use, 1900-1940, and anticipated acreages, 1940-60, in 11 Western States and in California, (6) and (7) feed-producing capacities (shown as acreages) of irrigated land, nonirrigated cropland, and grazing land in 11 Western States and in California, (8) cash farm income in California, 1910-43, by types of crops and livestock, (9) a comparison of cash farm income per acre of irrigated land in California, 10 Western States, and the 37 other States, and (10) the annual value of agricultural commodities produced in California, 1930-39.

197. Graphs relating to types of employment in California.

1943. 2 items. Manuscript graphs showing percentages of employees engaged in service, distribution, manufacturing, and extractive industries in California for 1920, 1930, 1940, 1942, and 1943, and changes in population, unemployment, and types of employment (manufacturing, extractive industries, transportation, service, building, and military service) from 1920 to 1943, with projections for the postwar period.

198. Graphs compiled for a study of disbursement of county funds in California.

ca. 1941. 3 items. Manuscript graphs showing the total amounts of county and district disbursements, 1929-39, by functions; trends in county disbursements, assessed valuations, and population, 1920-39; and a comparison of the percentage increase in all county disbursements and the percentage increase in population, 1930-40.

199. Maps related to Central Valley project studies, California.

ca. 1940-46. 30 items. Maps from a series of studies sponsored by the Bureau of Reclamation under the direction of Harlan H. Barrows of the University of Chicago's Department of Geography. The work was conducted by 24 problem committees and a Joint Committee on Population. BAE officials participated as members and problem leaders.

Records of the studies include the following: manuscript and photoprocessed maps showing existing and future Bureau of Reclamation projects and the areas the projects served in the Central Valley; a manuscript map labeled "A.A.A. Communities-Central Valley Project, Project 19," prepared for Problem Leader Marion Clawson on the size of landholdings eligible for project water; manuscript maps showing the distribution of farm and nonfarm population in the Sacramento and San Joaquin portions of the Central Valley and densities of the total population and the rural population in the valley in 1940 by minor civil divisions; maps of the Sacramento Valley, including an undated photoprocessed map showing intensively farmed areas; a photocopy of a 1930 published map of the Sacramento Valley showing types of farming areas, compiled by L. A. Crawford of the University of California and E. B. Hurd of the Division of Farm Management; maps of the San Joaquin Valley showing proposed irrigation projects in 1942, irrigation districts, quality of soils, and changes in ground water from 1923 to 1942; maps of the southern San Joaquin Valley, including maps showing subarea boundaries and large-scale dot maps showing the distributions of all farms, fruit farms, dairy farms, and summer field crop farms; maps of the towns of Dinuba and Arvin compiled for a comparative sociological study by Walter R. Goldsmith and annotated to show sample residences, occupations, and levels of living; a map of the Arvin-Weedpatch area showing the changes in the extent of agricultural lands by years from 1937 to 1941; a map of the San Bernardino-Los Angeles area showing the quality of citrus groves in 1940; an undated map showing the relation of proposed wells to water supply for the Wasco Irrigation District and the South San Joaquin Municipal Utility District; and manuscript maps of the Madera Irrigation District, Madera County, showing areas used in an analysis of Agricultural Adjustment Administration data, location of seepage canals, quality of land, and extent of irrigated croplands in 1941.

200. Quadrangle maps showing crops raised in the Sacramento River Valley, Calif.

ca. 1944. 87 items. A series of large-scale photocopies of quadrangle maps annotated to show by operating units the types of crops grown, idle land, and game refuges. Tabulated by members of the Farm Management and Land Economics Divisions in

connection with Sacramento Valley water investigations studies made for the U.S. Army Corps of Engineers.

201. Maps showing proposed irrigation in parts of California.

1942. 2 items. Two published maps labeled "Figure 5" and "Figure 8" showing proposed development in the desert area of southeastern California and in the mountain area of northeastern California.

202. Topographic map of southern California.

n.d. 1 item. Photocopy of a manuscript map.

203. Manuscript maps showing the San Francisco Bay and the Los Angeles-San Diego areas.

n.d. 2 items. Small-scale maps showing the counties that are geographically related to the three metropolitan areas, but without explanation; perhaps prepared in connection with efforts to initiate local regional planning (ca. 1942).

204. Maps of townships in San Benito County, Calif., showing boundaries of farm operating units.

n.d. 8 items. Coverage includes Tps. 16, 17, and 18 S., Rs. 8, 9, 10, 11, and 12 E., Mount Diablo meridian.

205. Map of Nevada showing irrigated lands.

1941. 1 item. A photoprocessed map prepared jointly by the State Agricultural Experiment Station and the BAE.

206. Map of Washington showing land use.

1933. 1 item. A photoprocessed map compiled in 1933 by the State Agricultural Experiment Station in cooperation with the BAE showing irrigated and nonirrigated farming, forests, and other areas. Another copy of the map appears in entry 85.

207. Records relating to the Columbia Basin irrigation project, Washington.

1939-40. 89 items. The Bureau of Reclamation cooperated with the BAE and other Federal and State

agencies in investigations related to agricultural and settlement possibilities on the more than 1 million acres of newly irrigated land in central Washington. Included among the items are general maps and a topographic block diagram of the project area; a map of the United States showing the locations of people inquiring about settlement possibilities in the project area and classified as rural, town, or urban according to post office addresses; a schematic diagram of the responsibilities and activities of personnel from various State and Federal agencies involved in the

investigations; maps showing proposed rural shopping centers and service centers and their projected trade areas with estimates of prospective populations; a map showing recommended type of farming areas; and a set of 80 township maps (scale 1 inch to 1,000 feet) showing land classified according to quality and the acreage of each class in each section. Additional information on the investigations can be found in the Report of the Chief of the Bureau of Agricultural Economics, 1941.

Division of Farm Population and Rural Life

208. Manuscript map showing per capita Federal expenditures in Region 7 States, 1933-39.

ca. 1940. 1 item. Information is shown by counties. See also entry 44.

209. Graphs showing age composition of the population in the Pacific Coast States in 1930 and projected age trends from 1930 to 1960.

n.d. 3 items. Information is shown for California, Oregon, and Washington.

210. Maps and graphs relating to studies of migration to the Pacific Coast area, 1930-39.

1940-41. 35 items. Published and photoprocessed maps and graphs largely compiled from questionnaires submitted to newly arrived schoolchildren. Included are maps of the United States showing former residences of agricultural and nonagricultural families who migrated to the Pacific Coast area, (California, Arizona, Oregon, Washington, and Idaho), including separate maps for California and the Pacific Northwest; maps of the Pacific Coast States showing new residences of immigrant families and the distribution of schoolchildren of these families; maps compiled from special studies showing the distribution of socioeconomic status of immigrant families who settled in Coos County, Oreg., Yuba County, Calif., and Thurston County, Wash.; graphs showing the years of arrival of immigrants to California, Arizona, and the Pacific Northwest by occupational groups; graphs prepared from enumerations of the special skills of the immigrant families; and a graph showing the growth of population along the Pacific coast. The goals and findings of the study are

explained in Reports of the Chief of the Bureau of Agricultural Economics, 1939, 1940, and 1941.

211. Records relating to migrant workers and seasonal employment in the Western States.

ca. 1941-42. 7 items. Included are manuscript and photoprocessed maps and graphs, including a map showing the numbers and former State residences of persons seeking manual employment who entered California during 1940, by quarters; a graph showing the numbers of persons in need of manual employment who crossed into Arizona, Oregon, and Nevada by month from July 1935 to December 1940; a graph indicating degree of use of migratory labor camps in Arizona, northern California, the San Joaquin Valley, and the Imperial-Coachella Valley from January to April 1940, expressed as percentages of camp capacity; graphs showing seasonal farm labor requirements in Merced County (1937), the San Joaquin Valley (1942), and Fresno County (1937-41), Calif.; and a map showing areas using seasonal labor in Santa Barbara County, Calif., by type of crop grown.

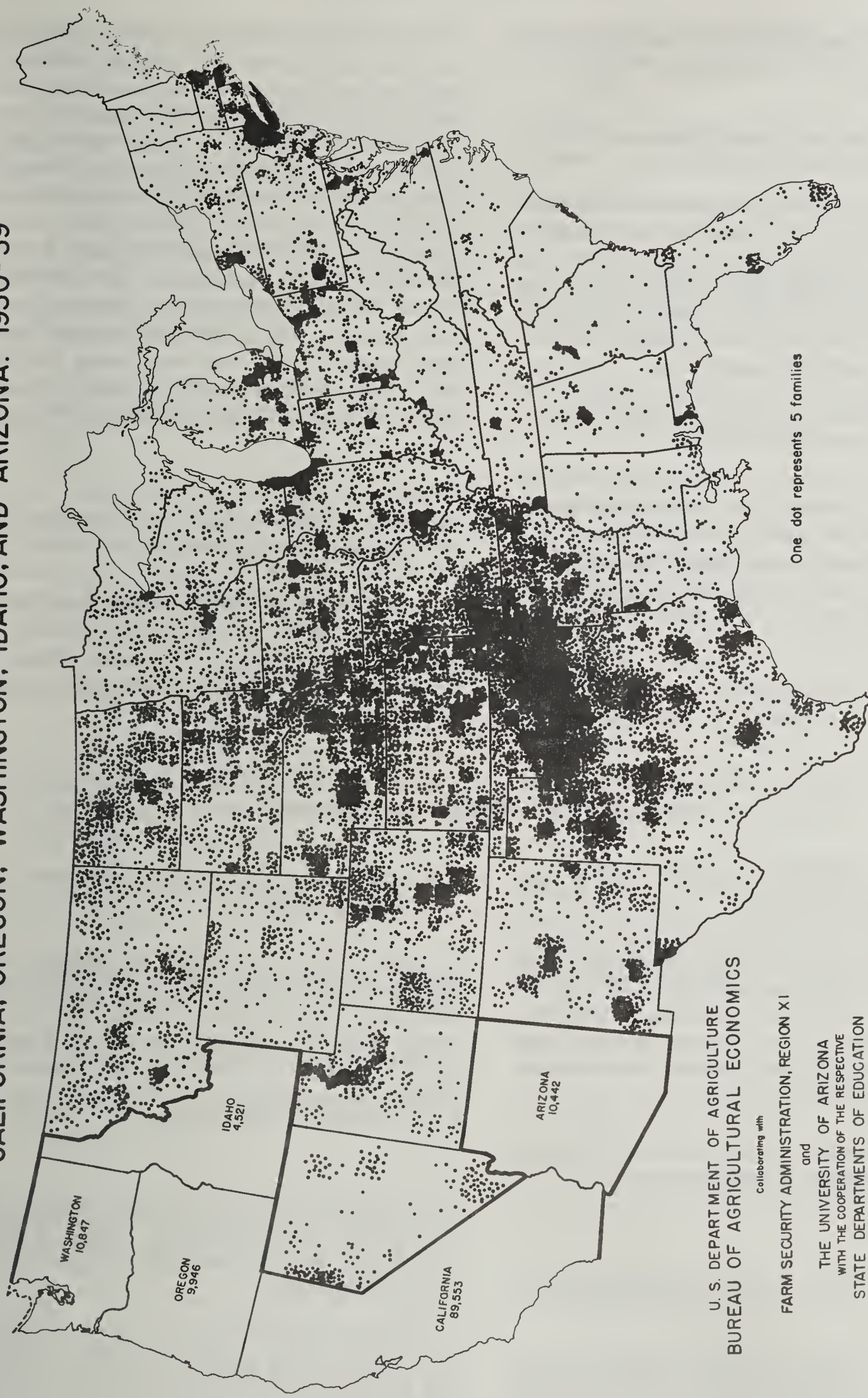
212. Panel of graphs showing distribution of heads of families according to occupation in the Western States.

ca. 1939. 1 item. Information is shown by States and regions. Prepared from 1930 census data.

213. Graphs relating to a farm economy survey in the Pacific Northwest.

ca. 1940. 4 items. Based on a survey of 948 farm families in Oregon and Washington. Shown are

RESIDENCE IN 1930 OF 125,309 FAMILIES MOVING TO THE STATES OF CALIFORNIA, OREGON, WASHINGTON, IDAHO, AND ARIZONA. 1930-39



net income and expenditures for housing and household operations, food, automobiles, and medical care. See also entry 45.

214. Map of California showing the areas covered by wage ceilings for raisin grape pickers.

1943. 1 item. Shows by county the number of growers in 1940 and the acreage of raisin grapes in 1942. Prepared by Metzler of the regional office for a study entitled "Analysis of the Operation of Wage Ceiling in Picking Sun-Dried Raisin Grapes, California, 1943"; part of a series of studies on war-related ceilings in California agriculture.

215. Graphs relating to climate and cotton production in Fresno County, Calif.

ca. 1942. 2 items. Two graphs labeled "Figure 2" and "Figure 3" showing by months from August to January the average percentage of cotton crop harvested and ginned, the amount of rainfall, and the average dates of the first killing frost. Part of a report; the years on which the information is based are not given on the graphs.

216. County maps of Arizona showing school districts and annotated to show returns by schools.

n.d. 12 items. Large-scale maps of all counties in Arizona except Maricopa, privately published in 1931, showing school districts and annotated to show the number of "returns" for each numbered school. Each annotation includes the initials "RC" preceded by "X," "V," or "O." The purpose of the returns is not shown, but it is possible that the maps were used in studies of migration to Arizona based on the surveys of schoolchildren described in entry 210. The base maps include information on settlements, ranches, abandoned dwellings, some residents, roads, railroads, mines, triangulation stations and benchmarks, springs, creeks, wells, water tanks, and landmarks. Arranged alphabetically by name of county; Navajo and Apache Counties are shown on a single map.

217. Map of Shelley, Bingham County, Idaho, prepared for a community study.

ca. 1943. 1 item. Manuscript map compiled for a study by Dahlke of the Division analyzing the effects of the war upon social structure. Shown are roads, dwellings, buildings, and residences included in the sample.

Division of Farm Management and Costs

218. Maps of California relating to types of farm production by county.

1939. 12 items. Small-scale manuscript maps showing the following as a percentage of all farms for each county: field crops, horticultural specialties, vegetables, dairy products, poultry products, livestock, fruits and nuts, products used by households, forest products, and others.

219. Photoprocessed map of Idaho showing irrigated and nonirrigated farming areas.

n.d. 1 item.

220. Map of Oregon showing land use and types of farming.

1935. 1 item. A manuscript map prepared by H. D. Scudder of the Oregon Experiment Station and E. B. Hurd of the Division.

221. Maps relating to the California State farm forestry program.

n.d. 2 items. Photocopies of published maps showing types of farming areas in the north central coast area, the Sacramento Valley, and the San Joaquin Valley in 1930, compiled by L. A. Crawford of the University of California and E. B. Hurd of the Division and annotated to show zones of the California State farm forestry program.

222. Maps showing farm operating units in the Tieton Irrigation District, Yakima County, Wash., and the Sunnyside Division of the Yakima project.

1937. 2 items. Manuscript maps compiled by H. F. Hollands of the Washington Experiment Station and E. B. Hurd of the Division. Related maps are described in entry 61.

223. Maps relating to studies of farms on the Owyhee project, Oregon.

1935-37. 14 items. Photoprocessed and annotated maps relating to the Bureau of Reclamation irrigation project in Malheur County, Oreg. Included are index maps showing areas studied and farms surveyed, a map of four selected sections illustrating potential farm boundaries modified to fit the pattern of nonirrigable land and a series of 11 large-scale "irrigation maps" showing names of landholders and annotated to show new landholders.

224. Map of the Yuma Mesa, Ariz., showing land classification, irrigation facilities, and soil profiles.

ca. 1941. 1 item. A manuscript map of the area south of the city of Yuma prepared in connection with a report by Fuhrman of the Division, which was requested by the Bureau of Reclamation for the Yuma Mesa Pre-Development Committee.

225. Map of Sutter County, Calif., annotated to show locations of Farm Security Administration farms.

n.d. 1 item. FSA farms are identified by numbers.

226. Chart showing historical precipitation data in northeastern Nevada.

1938. 1 item. Shows average monthly precipitation from 1911 to 1938. Based on data from seven stations at elevations of 6,100-7,100 feet.

227. Manuscript map of the Yacolt area, Clark County, Wash., showing roads and boundaries of an unidentified study area.

n.d. 1 item.

228. Photoprocessed map of the Getchell area, Snohomish County, Wash., showing the boundaries of an unidentified study area.

n.d. 1 item.

Division of Land Economics

General Records

229. Graph showing comparative growths of population and crop acreages in the United States, 1880-1960.

ca. 1940. 1 item. Information is projected for years after ca. 1940.

230. Graph showing changes in numbers of tenant-operated farms in the United States, 1930-35.

n.d. 1 item. Information is shown by States.

231. Map of the United States showing native vegetation.

n.d. 1 item. An undated photocopy of a map prepared by Raphael Zon of the U.S. Forest Service and H. L. Shantz, formerly of the Bureau of Plant Industry. Early versions of this map appeared in the 1921 and 1923 *Yearbooks of Agriculture*, and a version in color was published in the *Atlas of American Agriculture* in 1936. This map appears to be based on the 1923 version. The 1921 map, and possibly the others, was drafted by F. J. Marschner.

232. Land use adjustment areas maps of the United States and the Western Region.

1940. 2 items. A preliminary version of the national map prepared by the Land Classification Section in the central office (see entry 102) and sent to the regional offices for revision. Also included is a second version covering only Region 7.

233. Maps of the Western Region showing the locations of land economic research projects in 1940 and general area planning studies in progress.

n.d. 2 items. The map showing planning studies is not dated but probably was compiled about 1940.

234. Map showing possible recreational sites in the Western States.

n.d. 1 item. A published map of the United States annotated, probably by the Land Use Planning Section of the Resettlement Administration, to show

vacation areas "to be studied" within 25 and 50 miles of certain major western cities.

235. Maps showing locations of Japanese-Americans in the Pacific Coast States in 1940.

1944. 4 items. Published maps showing the Japanese population and Japanese-operated farms in California, the numbers and locations by county of Japanese-owned farms and Japanese-operated tenant farms in California, Oregon, and Washington, and percentage tenancy of Japanese-operated farms in those three States. These maps were published in a 1944 land tenure report by Adon Poli entitled "Japanese Farm Holdings on the Pacific Coast," filed among the textual records of the BAE.

236. Maps of the Western United States showing agricultural information by counties.

1939. 4 items. Manuscript and published maps showing the intensity of irrigated farming in 1939, predominant types of irrigated and nonirrigated crops in 1939, and tons of hay produced per forage-consuming animal, based on the census of 1930.

237. Manuscript graphs relating to studies of farm real estate in the Western States.

1945. 8 items. Based on surveys conducted for the period 1941-44 of 12 selected counties in 11 Western States. Subjects include the values of farms during World Wars I and II in the Western States and in California compared with those in the United States as a whole; the percentages of downpayments made for farm purchases by kind of financing; the average buyer's equity in farm real estate; the ratio between numbers of sales and purchases of farm real estate by farmers and by nonfarmers; percentage increase from 1939 to 1944 in the value of farm real estate for 11 Western States and the United States as a whole; and sources of new farm mortgage financing. In addition there is a map showing centers of farm real estate market activities in Region 7 by types of farms.

238. Maps of the Pacific Northwest Region prepared by the Land-Use Planning Section, Resettlement Administration Region XI.

1935-37. 8 items. The region was comprised of Washington, Oregon, and Idaho. Included are manu-

script and photoprocessed maps showing district boundaries and headquarters of the Works Progress Administration in the region; land elevations; types of farming areas; land use problem areas including submarginal land, abandoned farmlands, and areas in which farms are too small; potential settlement areas and reclamation needed for settlement; and the location of existing and proposed conservation and resettlement projects as of 1935.

239. Chart showing the status of land classification activities in Oregon, Washington, Idaho, and Montana.

n.d. 1 item. Progress in land classification mapping is shown for each county. This chart was probably prepared by the Land-Use Planning Section of the Resettlement Administration.

240. Map showing land use in the Southwestern States.

n.d. 1 item. A manuscript map showing irrigated farmland, dry farmland, grazing range or desert, and forest land. The map covers Arizona, California, Nevada, and Utah.

241. Land use planning maps of the Western States prepared under the direction of State land planning consultants.

1934-37. 125 items. State land planning consultants, appointed to the National Resources Board in 1934, were transferred to the Land-Use Planning Section of the Resettlement Administration in 1935 and subsequently to the BAE in the 1937-38 period when land planning functions were centered in the Division of Land Economics. Included in the cartographic records from the program are manuscript and photoprocessed maps of Arizona, California, Montana, Nevada, New Mexico, Oregon, Utah, and Washington showing problem areas, areas needing land use adjustment, and settlement areas. These maps were created to accompany land utilization reports prepared according to Bulletin A-13 of the National Resources Board and Field Instructions LU-30 and LU-35 of the Resettlement Administration.

The majority of the records from the Western Region are large-scale maps relating to California and compiled by the California unit of the Land-Use Planning Section to accompany the reports of the

State Planning consultant, Philip J. Webster. The show physical conditions, crops and livestock, types of farms, landownership, and population density, in addition to problem areas and areas suitable for settlement. (See also entry 253.)

The maps are listed by State in appendix X. Further information is given in entry 99 in which are described maps of States not in the Western Region.

242. Diagrams showing the relationship of soils to topography and native vegetation in counties included in land use studies.

ca. 1937-40. 7 items. Manuscript and photo-processed schematic diagrams based on county soil surveys. Information is shown for Pinal and Yuma Counties, Ariz., Benewah and Kootenai Counties and the Malad Valley, Idaho, Clark County, Wash., and Josephine County, Oreg.

243. Maps of Arizona and Utah annotated to show irrigated and dry farming areas.

ca. 1942. 2 items. The irrigated and dry farming areas are labeled either "II" or "III" and are based on a 1931 U.S. Geological Survey land classification. Annotations on the maps refer to an unidentified "attached text."

244. Maps of Arizona and Nevada showing existing and potential irrigation projects, 1944.

1944. 4 items. Included are two manuscript versions of the Arizona map and manuscript and published versions of the Nevada map showing new and supplemental irrigation projects. Attached to one of the Arizona maps is a key to the map listing 91 irrigation projects and proposed projects for Indian lands by counties and drainage basins. Part of an inventory of existing and potential irrigation in Arizona, Nevada, and Utah prepared by Philip Greisinger of the Division.

245. Maps showing irrigation projects in southern Arizona.

1935 and 1943. 2 items. Two manuscript versions compiled for the Arizona Committee for Regional Agricultural Planning showing 63 public and private irrigation projects. One map is dated 1935, and the other is on a 1943 base map.

246. Manuscript maps of Arizona relating to precipitation and grazing.

ca. 1936-42. 2 items. Included are a map compiled under the direction of the State land commissioner showing normal precipitation in the period 1936-38 and an undated map annotated "R-SW Cooperation Sheep Station" showing lands in the center of the State suitable for seasonal grazing and the locations of stock driveways.

247. Manuscript maps relating to the Lyman Dam project, Apache County, Ariz.

1936-39. 8 items. Included are maps relating to landownership and land quality compiled by the Land-Use Planning Section of the Resettlement Administration in 1936-37 and maps showing landownership tracts and dwellings, soil quality, and types of crops grown, compiled by the Land Economics Division in 1939.

248. Maps relating to studies of landownership, tax structure, and irrigation agriculture in the Casa Grande Valley, Pinal County, Ariz.

1939-40. 23 items. Photoprocessed, published, and annotated maps, many of which were prepared cooperatively with the University of Arizona. Included are maps of both the valley and the county showing soil groups, lands irrigated by the San Carlos irrigation project, landownership and tenure, tax levies, the rental and purchase status of State grant and institutional lands, the size of agricultural conservation and parity payments on State grant and institutional lands, and the allotment of short staple cotton established under the Agricultural Adjustment Administration. Several of the maps appear to be incomplete.

249. Manuscript map of Cochise County, Ariz., showing rural landownership patterns in 1941.

1941. 1 item. Prepared for a study of land tenure in the southeast ranching area of Arizona by Philip Greisinger. The study was ended early in 1942, and this map and a statistical summary reported as accompanying the map were its only accomplishments.

250. Manuscript maps of the Mohawk Municipal Water Conservation District, Yuma County, Ariz., showing soils, crops, and idle lands.

ca. 1937. 2 items.

251. Map showing distribution of tax delinquency in California, 1932-33.

n.d. 1 item. Photocopied from a Department of Commerce map giving delinquency percentages by county for State and local levies.

252. Panel of maps showing the historical development of counties in California.

n.d. 1 item. Included on the panel are eight manuscript maps giving data on county formations from 1850 to 1922, adapted from a 1923 report of the California Historical Survey Commission.

253. Maps of California relating to population.

ca. 1935-43. 10 items. Included are dot maps showing population distribution in 1935 and 1940 and maps showing rural farm population density, ca. 1935, population density by counties in 1870, 1900, 1930, 1940, and 1943, and California cities and towns of various sizes in 1940. The 1935 population distribution map was prepared by the Land Economics Division under the direction of Philip J. Webster, State land use planning specialist for both the Resettlement Administration and the BAE. (This map is further described in entry 92.) Accompanying this map is a table giving locations and analyses of nonurban areas showing a net increase of 100 families or more between 1930 and 1935, prepared by Webster for a 1937 Resettlement Administration report entitled "Significant Population Movements in Non-Urban Areas of California, 1930-35." (See also entry 241.)

254. Photoprocessed map of California showing locations of 114 Indian reservations.

ca. 1935. 1 item.

255. Maps of California showing the distribution of types of farms and the distribution of livestock based on the census of 1930.

n.d. 12 items. Photoprocessed dot maps in binder. The types of farms shown are cash-grain, dairy, fruit, poultry, truck, and all farms; livestock shown are beef and dairy cattle, chickens, sheep, and swine. An index map shows statewide judicial townships in 1935. Other versions compiled by the

Land-Use Planning Section are described in entry 241.

256. Manuscript map of California showing value per acre of farmlands and buildings by minor civil division, 1940.

n.d. 2 items. Included is a map identifying eight administrative regions of the State, the boundaries of which are shown on the manuscript map. A similar map of the entire United States showing value of farmlands is listed as entry 76, and one of California, based on 1930 information, is included in entry 241 (map 22).

257. Map of California annotated to show distribution and types of lumber mills.

ca. 1937. 1 item. A large-scale map based on 1934 and 1937 data showing sizes and locations of operating and nonoperating pine and redwood mills.

258. Maps and graphs relating to a study of land tenure in the Imperial Valley of California.

1942. 26 items. The study was prepared by Adon Poli of the Division. Included are manuscript and published maps and graphs covering the period 1936-39 showing by operating unit types of land-ownership and tenure, soil quality, and types of crops. Also included are maps of selected operating units in the Imperial Valley illustrating farms composed of noncontiguous tracts of land and maps of the Dos Palmas, East Side Mesa, West Side Mesa, and Coachella Valley showing agricultural and nonagricultural lands, types of soils, and irrigated lands.

259. Manuscript maps relating to land utilization studies of Santa Cruz County, Calif.

1936-41. 29 items. Maps prepared chiefly by the California unit of the Land-Use Planning Section of the Resettlement Administration. Shown are potential recreational districts and mortgaged farms in 1936, land use and recommended land use, natural land divisions, a topographic roughness index, adaptability of the land to agriculture, types of soils, kinds of crops grown, irrigated areas, maximum rainfall for the years 1889-90, minimum recorded rainfall for the years 1923-24, and mean annual rainfall in the period 1911-37.

260. Maps relating to land use in Tulare County, Calif.

ca. 1944. 3 items. These consist of an undated manuscript map showing names of certain landholders in northern Tulare County an undated photoprocessed map showing towns and the extent of irrigated land and a map of the topography of the Tulare Lake Basin annotated by A. G. Atkins in 1944 to show extent of areas inundated in various years.

261. Maps relating to land use studies of Yuba County, Calif.

1939-40. 7 items. Compiled in cooperation with the University of California. The maps show roads, schools, settlements, landownership, grazing and forest resources, quality of lands, land utilization, and recommended land use classification. Also included in a graph showing rural population by age groups.

262. Population map of Bakersfield, Calif.

ca. 1942. 1 item. A photoprocessed map showing the 1940 population by a dot pattern (each dot represents 20 people) prepared by the Kern County Planning Commission and annotated "Kern County Library Study."

263. Map of the South Coastal Basin (Los Angeles area), Calif., showing ground water basins and locations of wells.

n.d. 1 item.

264. Maps showing properties owned by the Miller & Lux Corp. in Fresno and Merced Counties, Calif.

n.d. 2 items. Apparently compiled in connection with the mapping of lands in California available for further settlement, described in entry 241.

265. Maps of the Turlock Irrigation District, Stanislaus and Merced Counties, Calif., with unidentified annotations.

n.d. 2 items.

266. Maps of Benewah County, Idaho, compiled for a land utilization study .

1937-38. 4 items. The study was begun by the Land-Use Planning Section of the Resettlement Administration. The maps are photoprocessed and show vegetation cover, roads, farm units, dwellings, stores, hotels, schools, churches, camps, sawmills, landownership types, and recommended land use.

267. Maps of the Malad Valley, Oneida County, Idaho, compiled for a land and water utilization study.

1937-38. 3 items. Manuscript and photoprocessed maps compiled by the Land-Use Planning Section, Resettlement Administration. Shown are land classifications (including existing and potential land use), types of soils, and topography.

268. Maps of Kootenai County, Idaho, compiled for a land utilization study.

1939. 2 items. Photoprocessed maps showing vegetation cover, adaptability of land to agriculture, and land use.

269. Miscellaneous maps of counties in Idaho.

1936-37. 4 items. Prepared by the Land-Use Planning Section of the Resettlement Administration. Included are photoprocessed and manuscript maps showing rural landownership in Clark County, location and size of schools in Latah County, types of soils in Boundary County, and land classification in the Cohn Ranch near Arimo, Bannock County.

270. Annotated map of the Flathead Indian Reservation in Montana.

n.d. 1 item. A 1923 base map annotated to show land under Indian control, land owned by whites, land under option with tract numbers, areas the U.S. Forest Service desired as a range for its pack animals, and the Montana Bison Range inside the reservation. The reservation is located in Sanders, Lake, and Missoula Counties.

271. Maps relating to the Pahrnagat Valley, Lincoln County, Nev.

1936. 2 items. Manuscript maps prepared by the Resettlement Administration showing the names of landholders and ranches and the extent of alkali soils.

272. Miscellaneous maps of parts of Nevada.

1937. 2 items. Manuscript maps prepared by the Resettlement Administration. Included are a base map of a part of the Virgin Valley and a land use map of the Cornell and Vencillo ranches near Fallon, Churchill County.

273. Miscellaneous maps of parts of New Mexico

1930-36. 2 items. A soil map of the Graham-MacDonald tract, Bernalillo County (1936), and a graphic illustration showing distribution of crops, livestock, and farms in Santa Fe County (1930).

274. Maps prepared by the Oregon State Planning Board showing existing and potential irrigation.

1937-38. 9 items. Maps of parts of Oregon showing drainage basin boundaries, irrigation district boundaries, areas irrigated in 1936, irrigation areas controlled by individuals or groups, existing and potential storage reservoirs, potential irrigation by ground water, and areas of feasible irrigation expansion. Covered are the Hood River-Dalles, John Day-Umatilla, Willamette Valley, Klamath and Goose Lake, and Snake River areas, the Great Basin, and the southwestern part of the State.

275. Map showing land use in Coos County, Oreg.

1936. 1 item. A negative photoprocessed map compiled by the Land-Use Planning Section of the Resettlement Administration.

276. Maps and charts relating to a land utilization study of Benton County, Oreg.

1939-40. 12 items. Manuscript and photoprocessed maps showing existing land use, adaptability of the land to agriculture, and landownership patterns. Also included is a series of charts showing the comparative importance of various crops and the use of croplands according to six numbered (unexplained) land adaptability classes.

277. Maps of Josephine County, Oreg., relating to studies of land use, taxes, and schools.

1936-38. 6 items. Apparently prepared by the Land-Use Planning Section of the Resettlement Administration. The maps show: land use and crops

grown in 1936, public and private land improvements in 1936, locations of rural schools, schoolchildren, and bus routes in 1936-37, a classification of school districts on the basis of cost per pupil (n.d.), and assessed valuation of land in 1937. Also included are a graph showing purposes of tax levies in mills by years from 1910 to 1934 and a map apparently compiled by the Land Economics Division describing a county land and water use plan in 1938.

278. Map showing acreage of canning peas in Umatilla County, Oreg., and Walla Walla County, Wash.

1942. 1 item. A photoprocessed dot map prepared for H. E. Selby in connection with studies of 1942 war production goals.

279. Map prepared for a land use study of the Uinta Basin, Utah, showing types of vegetation cover.

n.d. 2 items. A manuscript map on two sheets. Included are acreage figures for townships and areal units of vegetation.

280. Manuscript map of Carbon County, Utah, showing types of landownership and the boundaries of an unidentified "development."

n.d. 1 item.

281. Maps showing landholders in a portion of the Newcastle area of Iron County, Utah.

ca. 1941. 2 items. Tracings taken from a county property map. These maps are apparently related to a land utilization study of the "Southwest Utah Range Area," which involved the collection of ownership data in Washington and Iron Counties.

282. Photoprocessed maps of Garfield, Grant, and Island Counties, Wash., showing boundaries of farm units and names of some landholders.

1937-38. 3 items.

283. Maps of Snohomish County, Wash., relating to a land use study.

1936. 2 items. Manuscript maps compiled by the Land-Use Planning Section, Resettlement Administration, showing locations of roads and schools in

the western part of the county and areas covered by soil surveys as of 1936.

284. Maps of Grays Harbor County, Wash., compiled for reconnaissance land classification.

1936. 6 items. Two of the maps show county- and State-owned land and land subject to tax foreclosure (1936), and one is an undated map showing the area involved in a land-clearing project in the Humptulips River Valley. Three are unfinished manuscript maps.

Water Utilization Section.

286. Map of the Southwestern States showing river basins involved in water facilities and flood control programs.

1940. 1 item.

287. Maps of Utah showing natural surface water supply areas and drainage basins.

1943-44. 2 items. Photoprocessed maps. An accompanying index specifies water supply areas and subareas. Similar maps covering the 17 Western States are described in entries 180 and 181.

288. Annotated maps of selected drainage basins in Utah prepared by the Utah State Planning Board.

1939. 5 items. Annotations to the maps were added by the State land use planning specialist. Included are maps of the watersheds of the Sevier, Virgin, Bear, and Weber Rivers. Subjects shown are gaging stations, irrigated lands, dry farmlands, reservoirs and proposed reservoir sites, canals, hydro-electric plants, and publicly owned lands.

289. Map of the Upper Colorado River Basin showing irrigation facilities.

1938. 1 item. A manuscript map prepared by the Colorado State Planning Commission for the development plan of the Upper Colorado River Basin

285. Maps compiled for land utilization studies of Clark County, Wash.

1937-38. 13 items. Most of the maps were prepared by the land use planning specialist for Washington. Included are maps showing names of local areas, dwellings, land use, vegetation, quality of soils, public facilities, locations and values of improved lands, types of landownership, locations of rural mail routes, and assessed values of rural land.

Committee. Shown are arable and irrigated areas, reservoirs, transmountain diversions, damsites, ditches, and towns. Parts of Wyoming, Colorado, Utah, Arizona, and New Mexico are included.

290. Maps accompanying a water utilization report on reservoir sites in Josephine and Jackson Counties, Oreg.

1939. 6 items. The report was prepared by J. W. Smith. Included are manuscript maps prepared for publication and numbered I-VI. Three of the maps show the region and sites investigated, the specific areas "referred to in the text," and the locations of test wells in the Illinois River Valley; the other three are reservoir site maps that show the Grouse Creek, Grave Creek, and Winona sites. The reservoir site maps include topographic information, a profile of the centerline of each dam, and a table of the reservoir's capacity in acre-feet of water.

291. Miscellaneous maps relating to water facilities plans in Arizona, California, and Utah.

1936-41. 20 items. Manuscript, photoprocessed, and annotated maps of watersheds and related areas showing irrigation facilities, land use, and other information. The maps complement those water facilities maps retained in the records of the central office and described in entries 182 and 183. A list of the areas and subjects covered appears in appendix XI.

Flood Control Section

292. Maps showing status of the flood control program in the Western States.

1937-41. 3 items. These consist of a map showing watersheds in the 11 Western States involved

in flood control examinations in 1939, a map of California and Nevada showing the status of flood control investigations and main flood damage areas in 1941, and a map showing status of aerial photography used in flood control work in California, with the dates various sections were photographed, 1937-40, and sections proposed for 1941. See also entry 286.

293. Maps relating to flood control examinations in Arizona, California, Idaho, Nevada, and Utah.

1939-42. 73 items. Manuscript, photoprocessed, and annotated maps of watersheds and related areas showing flood areas, irrigation, land use, landownership patterns, and other information. Most of these were prepared to accompany preliminary

examination reports of the flood control program, and the others were apparently accumulated as reference maps. Only a few of the watersheds examined in the program are represented. Arranged alphabetically by State and thereunder by name of watershed or area. A list of the areas and subjects covered appears in appendix XII.

294. Maps relating to flood plain zoning in the Los Angeles area.

ca. 1941. 2 items. Photoprocessed maps showing topography, land use, and areas subject to flooding in the Santa Anita Wash area and in the Johnson Lake and Laguna Dominguez districts of Los Angeles County.

Appendixes

I. Maps Compiled by State and County Planning Committees

(Entry 72)

<u>State maps</u>	Lafayette	Indiana	Morgan
Maine	Madison	Adams	Newton
New York (south central part)	Palm Beach	Allen	Noble
Ohio (incomplete)	Seminole	Benton	Ohio
Vermont	Walton	Blackford	Owen
Washington	Georgia	Boone	Parke
	Brooks	Brown	Perry
	Bulloch	Cass	Porter
	Butts	Clay	Posey
<u>County maps</u>	Cobb	Clinton	Pulaski
Alabama	Coweta	Crawford	Putnam
Lee	Crawford	Daviess	Randolph
	Dougherty	Dearborn	Ripley
Arizona	Effingham	De Kalb	Rush
Yuma	Floyd	Elkhart	St. Joseph
	Greene	Floyd	Scott
Arkansas	Gwinnett	Fountain	Shelby
Arkansas	Harris	Franklin	Spencer
Drew	Lowndes	Fulton	Starke
Howard	Madison	Gibson	Steuben
Pope	Marion	Grant	Sullivan
Randolph	Mitchell	Hamilton	Switzerland
Yell	Muscogee	Hancock	Tipton
	Newton	Harrison	Union
California	Pickens	Hendricks	Vanderburgh
Butte	Pierce	Henry	Wabash
Colusa	Screven	Howard	Warren
Kern	Sumter	Huntington	Warrick
Lassen	Talbot	Jackson	Washington
Riverside	Taylor	Jay	Wayne
San Joaquin	Thomas	Jefferson	Wells
Sonoma	Tift	Jennings	White
Yuba	Walker	Knox	Whitley
	Walton	Kosciusko	
	Wilkes	Lagrange	Louisiana
Florida	Idaho	La Porte	Beauregard
Columbia	Benewah	Lawrence	Franklin
Escambia	Franklin	Marion	Jefferson Davis
Glades	Kootenai	Marshall	Lafayette
Hendry	Oneida	Martin	La Salle
Hillsborough	Power	Monroe	Livingston
Jefferson		Montgomery	Madison

County maps	George	North Carolina	South Dakota
Louisiana—Continued	Harrison	Caswell (base map	Marshall
Rapides	Jones	also shows Negro	Sanborn
Sabine	Lafayette	and white resi-	Tripp
St. Martin	Madison	dences)	Union
Terrebonne	Marion		
Washington	Newton	North Dakota	Tennessee
Winn	Oktibbeha	Bowman	Bledsoe
	Prentiss	Burke	Claiborne
Maine	Simpson	Burleigh	Coffee
Androscoggin	Tishomingo	McKenzie	Humphreys
Aroostook	Washington	Pierce	Roane
Cumberland	Winston	Renville	
Franklin		Rolette	Texas
Hancock	Missouri	Sargent	San Saba
Kennebec	Andrew	Sheridan	Vermont
Knox	Audrain	Towner	Addison
Lincoln	Barton	Ward	Bennington
Oxford	Callaway		Caledonia
Penobscot	Greene	Ohio	Chittenden
Piscataquis	Henry	Ashtabula	Essex
Sagadahoc	Lawrence	Belmont	Franklin
Somerset	Newton	Clark	Grand Isle
Waldo	Pemiscot	Columbiana	Lamoille
Washington	Reynolds	Fayette	Orange
York	St. Charles	Hamilton	Orleans
	Shelby	Hancock	Rutland
Maryland	Stoddard	Hardin	Washington
Frederick	Texas	Highland	Windham
Kent	Wayne	Holmes	Windsor
		Miami	
Massachusetts	Montana	Morrow	Virginia
Essex	Roosevelt	Paulding	Culpeper
Town of Williamstown	Valley	Perry	
		Pike	Washington
Michigan	Nebraska	Preble	Douglas
Charlevoix	Box Butte	Putnam	Klickitat
Iron	Dawes	Ross	Pierce
Mason	Morrill	Van Wert	Skamania
Midland	Sheridan	Williams	Snohomish
Oceana			Spokane
St. Joseph		Oklahoma	Thurston
		Okfuskee	
Minnesota	New Hampshire		West Virginia
Carlton	Belknap	Oregon	Barbour
	Coos	Clatsop	Berkeley
		Gilliam	Lewis
Mississippi			Pocohontas
Alcorn	New York	Rhode Island	Ritchie
Amite	Chemung	Bristol	Wood
Claiborne	Rensselaer	Kent	
Coahoma	Schuyler	Providence	Wisconsin
Covington	Wyoming	Washington	Door

II. Miscellaneous County Maps Prepared by County Planning Committees (Entry 73)

Arizona. A manuscript map of Yuma County showing crops raised in the Yuma, Parker, and Wellton-Roll areas in 1937.

Colorado. Seven published maps of Delta County (ca. 1940) showing existing land uses, soil types, a road development program, soil fertility, and the following problem areas: erosion, water shortage, seepage and domestic water, and pests and weeds.

Maryland. A published map of Washington County showing boundaries of planning communities and neighborhoods in 1937 and an undated published map of Kent County showing seven regions and numerous smaller areas, all unidentified but perhaps representing planning committees and operating units.

Massachusetts. An undated published map of Essex County showing frost dates and the length of the frost-free season.

Michigan. A published map of Charlevoix County showing land types, dated 1940.

Minnesota. Published soil maps of Scott and Swift Counties, dated 1941.

Missouri. Undated published maps of the Pond Fork purchase unit of the Mark Twain National Forest in Taney County showing timber, livestock, and grazing zones and recommended land classification.

Montana. Published maps of Fergus County (ca. 1941) showing boundaries of planning communities, community centers, Rural Electrification Administration lines, grazing districts, schools, roads, quality of farming and grazing land, and recommended land use adjustment areas; included are maps of the Nine Sections Coffee Creek area of the county showing names of landholders in 1938, soil types and productivity, tax delinquency status, land use, and recommended land use.

Manuscript maps of Teton County (ca. 1940) showing recommended land use, community boundaries, irrigation districts, school districts, roads, quality of farming and grazing land, tax delinquency areas as of 1936, and landownership patterns in 1937. In addition,

there are several plats of T. 23 N., R. 2 W., showing land classification and landownership and a printed chart showing the relationship of the county planning committee to Federal and State organizations.

Published maps of the northwest portion of T. 27 N., R. 41 E., Valley County, showing quality of soil, land use, operating units, and names of landholders in 1938.

New Hampshire. An undated published highway map of Belknap County showing roads used locally and existing roads that probably will not be needed in the future.

New Jersey. Manuscript maps of Atlantic, Gloucester, Cape May, and Burlington Counties showing types of farms by crops and numbers of farms of each type in 1939, and manuscript and published maps of Pemberton and Woodland Townships, Burlington County, showing landownership and tax information.

Ohio. A manuscript map of Clermont County (ca. 1940) showing nonagricultural lands, lands of questionable suitability to agriculture, topography, and drainage problem areas; a manuscript map of Hancock County showing average soil productivity, areas of overflow and muck, and rough lands; and a manuscript map of Meigs County showing farmland, marginal land, submarginal land, gas wells, oil wells, electric lines, coal mines, salt mines (abandoned and operating), churches, and schools.

South Dakota. Published maps of Tripp County showing soils, land use in 1938, and landownership patterns in 1940 and a map of Marshall County showing landownership patterns in 1939.

Tennessee. Published maps of Cumberland and Roane Counties, 1940-41, showing boundaries of planning communities and neighborhoods.

West Virginia. Manuscript overlay maps of Lewis County showing soils, slope, and extent of erosion.

Wyoming. A published map of Platte County showing landownership patterns in 1939.

III. Maps of Eastern and Southern States Prepared by State Land Planning Consultants (Entry 99)

Arkansas, Louisiana, and Mississippi

Problem areas (revised 1937). A regional map showing submarginal land, land needing larger farms or supplemental income, land damaged by erosion but on which erosion can be controlled, land suited for farming with reclamation, land best suited to be reservoirs or recreational land, and land of exhausted fertility in need of improved practices.

Arkansas

Problem areas (1935). Symbols keyed to LU-30 report. Two versions.

Resettlement (1935). Shows amount of improved farmland.

Percent of farmland in the category "other land in farms - 1930 U.S. Census" (1935).

Problem areas (revised 1938). Shows information similar to that on the Arkansas, Louisiana, and Mississippi map above.

Georgia

Problem areas (1935). Symbols keyed to LU-30 report.

Classification of problem I areas according to proposed elimination of farms as described in LU-30 report (1937).

Illinois

Proposed Federal and State purchase units (1934).

Louisiana

Land in State ownership because of nonpayment of taxes (1934). A bound set of 60 maps of parishes and

a composite map of the State in four sections showing information at the level of operating units. The parish base maps are State Highway Commission maps dated 1932-34 showing towns, types of roads. State highway projects, boundaries of wards, and locations of rural schools.

Michigan

Locations of poor agricultural land and areas of concentrated farm population (1934).

Areas in which 20 percent of the farms are on the poorest land (1935).

Mississippi

State-owned lands (1934). Information is shown at the level of operating units.

Revised problem area map (1936). Shows submarginal land, land suitable for agriculture, land where 20 percent of the farms need change in size or income, distressed drainage districts, and farmland needing reclamation.

Texas

Problem area maps (1935, 1937, and 1939). The 1935 map shows numerous problems such as poor land, land where farms are too small, areas in financial distress, areas with diminishing underground water supplies, lands in need of public management, and areas where farm settlement should be discouraged. The 1937 and 1939 maps show areas needing recommended adjustments from farming to grazing or forestry and areas needing increased farm sizes.

IV. Maps in the Numbered Map Collection of the Land Classification Section (Entry 109)

A-series (problem areas in need of adjustment)

United States A-10

Areas in which 20 percent or more of the farms should be larger in order to provide adequate family living and to permit soil maintenance.

(Land Classification Unit, Land Utilization Division, 1935.)

C-series (forest and vegetation cover)

United States C-4

Recreational areas of the United States under

Federal or State Government. (National Park Service, 1936.)

Alabama C-1

Major forest types. (Forest Service, 1934.)

California C-1

Natural cover and agricultural land use. (Land Planning Consultant, National Resources Board, 1934.)

California C-5 through C-43

Vegetation types. (Forest Service quadrangles of parts of California. Surveyed 1928-32.)

Name of quadrangle

C-5 Cucamonga
C-6 Pasadena
C-7 Pomona
C-8 Ramona
C-9 Redlands
C-10 San Antonio
C-11 San Bernadino
C-12 San Gorgonio
C-13 San Jacinto
C-14 San Mateo
C-36 San Fernando
C-37 Santa Susana
C-38 Tujunga
C-39 Rock Creek
C-40 Piru
C-41 Elsinore
C-42 Elizabeth Lake
C-43 Calabasas

Florida C-1

Major forest types. (Forest Service, 1934.)

Georgia C-2

Major forest types. (Forest Service, 1934.)

Louisiana C-1

Major forest types. (Forest Service, 1934.)

Maryland C-2

Forested areas. (University of Maryland and State Department of Forestry, 1927.)

Michigan C-2

Farm-forest types in southwestern part of Iron County. (Michigan Land Economic Survey, 1930.)

Michigan C-15

Forest cover and land use in Antrim County. (Michigan Land Economic Survey, 1930.)

Minnesota C-7

Forest cover and land use in Hubbard County. (Minnesota Department of Conservation, 1930.)

Mississippi C-22

Major forest types. (Forest Service, 1934.)

Missouri C-1

Portfolio entitled "The Ozark Parkway Unit One Preliminary Proposal for a Land Program Project Submitted by National Park Service. . . Missouri State Planning Bd. June 1935. Exhibits."

Texas C-2

Manuscript map of Wise County showing land use recommendations according to soil and physical features. (Land Utilization Division, Region VIII, n.d.)

D-series (soil and landscape features)

United States D-1

Reconnaissance Erosion Survey. (Soil Conservation Service, 1935.)

United States D-13

Drainage basins of the United States. (U.S. Geological Survey, 1916 edition, reprinted 1927.)

United States D-23

Important soil and plant growth regions of the United States. (SCS, 1937.)

Alabama D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

Arkansas D-8

General survey soil map. (Agricultural Experiment Station, 1938.)

California D-2

Soil map of Alturas areas. (Agricultural Experiment Station, ca. 1931.)

California D-8

Soil map of lower San Joaquin Valley. (Agricultural Experiment Station, ca. 1931.)

California D-9

Soil map of north central coast area. (Agricultural Experiment Station, ca. 1931.)

California D-10

Soil map of southern California. (Agricultural Experiment Station, ca. 1931.)

Florida D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

Florida D-2

Generalized soil map. (Florida Geological Survey, 1925.)

Georgia D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

Illinois D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

Illinois D-15

Drainage reclamation map. (State Geological Survey Division, 1928.)

Illinois D-16

Mineral industries. (State Geological Survey Division, 1930.)

Iowa D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

Kentucky D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

Louisiana D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

Maine D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

Maryland and Delaware D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

Massachusetts, Rhode Island, and Connecticut D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

Michigan D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

Minnesota D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

Missouri D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

Nebraska D-2

Reconnaissance Erosion Survey. (SCS, 1934.)

New Hampshire and Vermont D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

New Jersey D-2

Reconnaissance Erosion Survey. (SCS, 1934.)

New York D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

North Carolina D-1

Map showing areas with "A and B crop productivity ratings." (Author not shown, 1935.)

North Carolina D-2

Map showing areas with "C and D crop productivity ratings." (Author not shown, 1935.)

North Carolina D-4

Reconnaissance Erosion Survey. (SCS, 1934.)

North Dakota D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

Ohio D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

Pennsylvania D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

South Carolina D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

South Dakota D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

Tennessee D-2

Reconnaissance Erosion Survey. (SCS, 1934.)

Texas D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

Virginia D-4

Geologic map of the Appalachian Valley in Virginia. (Virginia Geological Survey, 1933.)

West Virginia D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

Wisconsin D-1

Reconnaissance Erosion Survey. (SCS, 1934.)

E-series (landownership)

Arizona E-1

Two maps showing land in private and State ownership. (Author not shown, n.d.)

Washington E-1

Landownership in Pend Oreille, Stevens, and part of Spokane Counties. (1933. Redrawn in 1934 by the Agricultural Adjustment Administration from Forest Service data.)

H-series (base maps)

Alaska H-2

General Land Office base map of Alaska, 1935.

Idaho H-2

General Land Office base map of Idaho, 1932.

I-series (crop yield)

Arkansas I-1

Yield per acre of cultivated land. (University of Arkansas College of Agriculture, ca. 1935. Annotated "Mr. Willard's Map" and "return to F. J. Marschner.")

Louisiana I-1

Cotton production: acreage per contract in 1934. (Land Utilization Division, Region VI, 1936.)

Louisiana I-4

Cotton production: total acreage per farm in 1934. (Land Utilization Division, Region VI, 1936.)

Louisiana I-5

Cotton production: acres in cultivated crops per contract in 1934. (Land Utilization Division, Region VI, 1936.)

Louisiana I-6

Cotton production: lint-pounds per acre in 1934. (Land Utilization Division, Region VI, 1936.)

Montana I-16

Land classification in Chouteau County according to yield of spring wheat. (Land Utilization Division, n.d.)

New Hampshire I-1

Commercial agricultural production, 1935-36. (Agricultural Experiment Station, 1937. Large-scale dot map showing distribution of hens, cows, potatoes, fruit trees, vegetables, maple sugar, strawberries, blueberries, and firewood.)

Washington I-2

Average wheat yield in Washington: 3- and 4-year averages from wheat allotment records, 1929-32. (Agricultural Experiment Station, n.d.)

J-series (land classification)

Alabama J-1

Land classification according to type of land problem. (Land Utilization Division, Region V, n.d. See entry 111.)

Alabama J-3

Use-district land classification of Coffee County. (Land Utilization Division, Region V, ca. 1935.)

Alabama J-9

(Duplicate of J-3.)

Colorado J-1

Land classification of central Great Plains, sheet 4. (Departments of Interior and Agriculture, 1930.)

Colorado J-2

Land classification of central Great Plains, sheet 5. (Departments of Interior and Agriculture, 1930.)

Colorado J-3

Land classification of southwest Colorado. (Departments of Interior and Agriculture, 1930.)

Colorado J-4

Land classification of northwest Colorado. (Departments of Interior and Agriculture, 1930.)

Florida J-1

Land classification according to type of land use problem. Land Utilization Division, Region V, n.d. See entry 111.)

Florida J-22

Land classification of Lake County according to type of land use problem. (Land Utilization Division, Region V, 1937. See entry 111.)

Kansas J-1

Land classification of central Great Plains, sheet 2. (Northwest Kansas and southwest Nebraska; Departments of Interior and Agriculture, 1930.)

Michigan J-2

Agricultural land classification of Michigan. (J. O. Veatch, Michigan Experiment Station, 1933.

Shows quality of land by a dot pattern and includes suggested adjustments.)

Montana J-2

Land use and soils in Petroleum County. (Author not shown, n.d.)

Montana J-12

Land classification of northern Great Plains, sheet 2. (Departments of Interior and Agriculture, 1930.)

Montana J-13

(Same as J-12; sheet 3.)

Montana J-14

(Same as J-12; sheet 4.)

Montana J-15

(Same as J-12; sheet 5.)

Nebraska J-1

Land classification of central Great Plains, sheet 1. (Departments of Interior and Agriculture, 1930.)

Nevada J-6

Land classification of Newlands Reclamation Project. (Agricultural Experiment Station, ca. 1935.)

North Dakota and South Dakota J-1

Land classification of northern Great Plains, sheet 6. (Departments of Interior and Agriculture, 1930.)

North Dakota and Montana J-2

Land classification of northern Great Plains, sheet 1. (Departments of Interior and Agriculture, 1930.)

South Carolina J-1

Land classification according to type of land use problem. (Land Utilization Division, Region V, n.d. See entry 111.)

South Carolina J-5

Land classification of Poinsett Forest Project, Sumter County. (Land Utilization Division, ca. 1935. See entry 111.)

South Dakota J-1

Land classification of northern Great Plains, sheet 7. (Departments of Interior and Agriculture, 1930.)

Virginia J-9

Land classification of Montgomery County. (State Planning Board, 1936.)

Wyoming J-1

Land classification of northern Great Plains, sheet 8. (Departments of Interior and Agriculture, 1930.)

Wyoming J-2

Land classification of central Great Plains, sheet 3. (Departments of Interior and Agriculture, 1930.)

M-series (physical and cultural regions of the United States)

United States M-7

Natural land use areas of the United States.
(Barnes & Marschner, BAE, 1933.)

United States M-10

Types of farming areas in the United States. (BAE and Department of Commerce, 1930. Two copies annotated to show regional variations.)

United States M-13

Physical divisions of the United States. (Prepared by Nevin Fenneman in cooperation with the Physiographic Committee of the U.S. Geological Survey; 1930 edition.)

United States M-16

Regionalized types of farming in the United States. (Agricultural Adjustment Administration Planning Division, n.d.)

V. Geological and Miscellaneous Reference Maps Published by State Agencies (Entry 119)

Maps Showing Geological Formations

<u>Location</u>	<u>Date published</u>		
Alabama	1904	New York (economic mineral deposits)	1904
Arkansas	1929	New York (distribution of limestone)	1902
California	1938	Ohio	1909
Colorado	1913	South Carolina	1883
Georgia	1939	South Dakota	1932
Kansas	1937	Tennessee	1915
Kentucky	1907, 1927	Virginia	1928
Maryland (geology and soils)	1907	Washington	1936
Michigan, Sanilac County	1897	Wisconsin (12 sheets including geology, settlements and cultural features, soils, and vegetation)	1876
Mississippi	ca. 1915	Wyoming	1920
Montana	1921		
New Jersey	1921		
New York	1895		

Maps Showing Geomorphology

California and Nevada	ca. 1935	Wayne County	ca. 1925
Michigan	1906, 1911	Minnesota (3 sheets)	1914-16
Bay County	1905	New York	1905
Monroe County	1900	Wisconsin	1910

Miscellaneous Maps

California		New Hampshire	
Santa Clara Valley water recovery, 1935-36. n.d.		Forest types in southern New Hampshire. 1906.	
Colorado		New Jersey	
Topography. 1913.		Forest cover and drainage basins. 1900.	
Irrigation in San Luis Valley. 1929.		North Dakota	
Massachusetts		Soils. 1909.	
Existing and proposed open spaces. 1929.		Oklahoma	
Michigan		Types of landownership by operating units. 1939.	
Drainage basin boundaries. ca. 1935.		West Virginia	
Soils, slopes, and agricultural history of Ogemaw and Menominee Counties. 1923 and 1925.		Virgin and cutover forest areas. 1910.	
Topographic relief of Upper Peninsula. 1912.		Wisconsin	
		Soils of northern Wisconsin. 1918.	

VI. Crop and Livestock Maps, 1919-35 (Entry 121)

CROPS

Alfalfa—changes in acreage of alfalfa cut for hay, 1919-24, 1924-29, and 1929-34; alfalfa and timothy seed production, 1929.

Apples—sold, 1929; changes in distribution of apple trees, 1920-30 and 1930-35.

Apricot and quince trees—distribution, 1930.

Barley—changes in acreage of barley harvested, 1919-24 and 1929-34; sold, 1929.

Beans (commercial)—changes in acreage, 1928-35.

Beans and peanuts (ripe field)—changes in acreage, 1919-24 and 1924-29.

Blackberries, cranberries, currants, dewberries, loganberries, and raspberries—acreage, 1929.

Buckwheat—production, 1929.

Cabbage—acreage, 1929 and 1934.

Celery—acreage, 1929.

Cherry and fig trees—distribution, 1930.

Corn—changes in acreage, 1919-24 and 1919-34; sold, 1929; changes in acreage of corn for grain, 1909-19; acreage of sweetcorn, 1929; graph showing corn yield per acre in South Dakota, Nebraska, Kansas, and Colorado, 1866-1935.

Cotton—changes in acreage of cotton picked, 1929-34.

Cowpeas and Canada peas—acreage, 1929; changes in acreage, 1929-34.

Cucumbers—acreage, 1929.

Grapes—production, 1929.

Hay—production, 1929; sold, 1929; changes in acreage, 1909-19 and 1919-24; changes in acreage of hay and sorghums for forage, 1929-34.

Kafir and milo—increase in acreage, 1909-19.

Mixed grains (not separated in harvesting)—acreage, 1929.

Oats—sold, 1929; changes in acreage, 1909-19, 1919-24, and 1929-34.

Peaches—sold, 1929; changes in distribution of peach trees of all ages, 1920-30; distribution of trees of bearing age and not of bearing age, 1930.

Pears—sold, 1929; distribution of trees of bearing age and not of bearing age, 1930.

Plum and prune trees—distribution of trees of bearing age, 1930.

Potatoes—sold, 1929; acreage, 1934; changes in acreage harvested, 1929-34; surplus, late-crop, and early-crop potato States.

Rice—production, 1934.

Rye—changes in acreage harvested, 1919-24, 1924-29, and 1929-34.

Sorghums—harvested, 1929; acreage cut for hay, 1929; changes in acreage cut for grain and forage, 1929-34; acreage of sorghums, buckwheat, and velvetbeans, 1929, and changes in acreage, 1919-24 and 1924-29.

Sovbeans—production, 1929 and 1934; acreage, 1934; changes in acreage, 1919-29 and 1929-34.

Peanuts—production, 1929; acreage, 1929; sold, 1929.

Sugar beets and sugarcane—changes in acreage, 1929-34.

Sweet potatoes—sold, 1929.

Timothy cut for hay—acreage, 1924.

Vegetables grown for sale—changes in acreage, 1919-29 and 1929-34.

Tobacco, rice, and flax—changes in acreage, 1909-19, 1919-24, and 1929-34.

Wheat—changes in acreage of wheat harvested, 1909-19, 1919-24, and 1929-34; graph showing yield per acre in Kansas, Oklahoma, Nebraska, Montana, North Dakota, and South Dakota, 1866-1935.

LIVESTOCK

Bees—distribution of hives, 1930.

Cattle (except dairy)—distribution in 1930 of steers and bulls born in 1929 (yearlings) and in 1928 (2-year-olds); distribution of bulls born before 1929 and steers born before 1928; distribution of cows and heifers born before 1928 and heifers born in 1928; increase and decrease of cows and heifers 2 years old and over in the periods 1920 and 1920-35; distribution of calves sold and slaughtered in 1929; distribution of all other cattle sold and purchased by farmers and slaughtered on farms in 1929; farms not reporting cattle, 1935.

Cattle (dairy)—distribution of cows and heifers kept for breeding, for beef, or for both, 1929; distribution in 1930 of heifers born in 1928 and cows and heifers born before 1928; changes in distribution of cows and heifers milked, 1929-34.

Chickens—distribution in 1929 and changes in distribution, 1919-29 and 1929-34; sold in 1929; baby chicks bought by farmers in 1929.

Ducks and geese—distribution, 1929.

Goats—distribution of Angora and other than Angora, 1930.

Hogs—sold and slaughtered by farmers, 1929, and changes, 1920-25; changes in distribution of sows and gilts raised for breeding purposes, 1925-30; farms not reporting swine, 1935.

Horses and mules—changes in distribution, 1920-30 and 1930-35; changes in distribution of horses, 1930-35, and horse colts, 1920-30 and 1930-35;

horses sold and purchased on farms, 1929; decreases in numbers of mules, 1930-35; mules purchased and sold on farms, 1929; changes in distribution of mule colts, 1920-30; distribution of farms not reporting horses or mules, 1935, and changes, 1930-35.

Sheep and lambs—purchased and sold on farms, 1929; changes in distribution of sheep and lambs shorn, 1924-29 and 1929-34.

VII. Maps Used in the Preparation of *Land Use and Its Patterns in the United States* (Entry 169)

Maps Used As Illustrations in the Text

The item numbers shown are the figure numbers employed in the book.

1. Chart showing changes in the cropland-population ratio of the United States, 1880-1955. Two versions.
4. Land division types (areas covered by various survey methods, such as the Federal Rectangular Survey). Included are maps used in compilation and a related chart giving acreages by State.
9. Expansion of settlement in the United States, 1790-1890. Shown by isochronal lines.
10. Photoprocessed copy of original township plot of the Chicago Area (1836).
11. Land relief of the United States. Scale 1:5,000,000. Drafted by Marschner. Included are several photographic copies.
12. Glaciation in the United States.
13. Carolina bays (swamps or lakes). Distribution in relation to Quaternary and Tertiary deposits.
20. Land use and pump irrigation on the Llano Estacado of northern Texas and in the adjacent counties of New Mexico. Included is a separate map published in 1948 by the Texas Board of Water Engineers entitled "Map showing extent of Irrigation in the Southern High Plains in Texas. Progress Report No. 7." Individual wells are indicated on both maps.
21. Principal cropland areas of the United States, shown as percentages of land used for crops. Scale 1:5,000,000. A similar map covering only Louisiana appears in entry 157.
22. Population distribution, 1950. A dot map on a county outline base map; scale 1:5,000,000.
24. Wheat yield per seeded acre in the Great Plains, 1926-48.

Maps Used As Source Material for the Text

Maps and notes related to the Jackson Purchase in Tennessee and the George Rogers Clark grant in Indiana.

VIII. Manuscript and Photoprocessed Maps Relating to Water Facilities Plans (Entry 182)

Arizona

Kirkland Creek (Yavapai County). Landownership, existing water facilities, and existing recommended land use.

California

Fallbrook area (San Diego County). Crops grown. Upper Pit River (Lassen, Modoc, and Siskiyou Counties). Irrigated lands, water facilities, soil ratings, and types of ownership.

Colorado

Mosca Irrigation District (Alamosa, Rio Grande, Conejos, and Saguache Counties). Land use capabilities, Beaver Park Reservoir, precipitation at Garnett (1891-1942) and Manassa (1906-42), and average daily flow of Rio Grande.

North Fork of Cimarron River and Sand Arroyo (Colorado and Kansas). Climatological data, water resources, existing water facilities, and projected land use.

Purgatoire River Basin (Las Animas County). Irrigation facilities.

Republican River Basin (Colorado, Kansas, and Nebraska). Subareas, discharge, ground water, precipitation, irrigation projects, population, 1930; population loss, 1930-40; length of growing season, percentage of land in farms, 1934; intensity of drought, 1930-36; range-carrying capacity, wheat production risk; value of land and buildings per acre, 1935; geology, stream gaging stations, topography, and proposed reservoir sites.

Montana

Big Muddy Creek (Sheridan and Roosevelt Counties). Deviation from average precipitation, 1885-1940.

Bitterroot Valley (Missoula County). Hydrograph of Clark Fork River.

Musselshell River watershed (central Montana). Drainage.

Wibaux County. Subarea boundaries.

Nebraska

Cedar, Plum, and Beaver Creeks (east-central Nebraska). Irrigation facilities.

Republican River (southern Nebraska). Land types. (See also Colorado.)

Nevada

Virginia River Valley—Meadow Valley subarea (Lincoln County). Irrigated areas, type of ownership, and water facilities.

New Mexico

Lower Tularosa Basin (Otero County). Base map. Placitas area (Sandoval and Bernalillo Counties). Landownership types and irrigation facilities.

San Juan County. Ditch system.

Trujillo area (San Miguel County). Landownership and water facilities.

North Dakota

Heart River Basin (Stark and Billings Counties). Gaging stations, water rights, land use, and irrigation.

Upper Cannonball River (Slope and Hettinger Counties). Extent of cropland based on 1933 records.

Texas

Brady area (McCulloch County). Drainage and roads.

Champion Creek Basin (Mitchell and Nolan Counties). Drainage.

Coleman County. Drainage, roads, dam profiles, and lake basin topography of Lost Creek and Spring Creek.

Muleshoe (Bailey County). Hydrology.

Paloduro Basin (northern Texas). Drainage.

Randall County. Water resources and site of proposed Umbarger Dam on Tierra Blanca Creek.

Rita Blanca and Major Long's Creeks (Texas and New Mexico). Drainage.

Wolf Creek (Ochiltree County). Drainage.

Washington

Little Spokane River Valley (Spokane County).
Land use.

Wyoming

Powder River (northern Wyoming). Drainage and
ranches.
Upper Green River (Sublette County). Drainage
and the Sublette grazing district.

IX. Published Maps Relating to Water Facilities Plans (Entry 183)

(There are maps showing water facilities for nearly all watersheds. These are not listed below.)

Arizona

Camp Verde subarea (Yavapai County). Names of
landholders.
Kirkland Creek watershed (Yavapai County). Land
use.
Northern Sulphur Springs Valley (Cochise and
Graham Counties). Climate, land use, hydrology,
and soil quality.
Upper San Pedro (Cochise and Santa Cruz Counties).
Landownership and land use.
Upper Virgin River (Washington County, Utah,
and Mohave County, Ariz.). Flood and
drought hydrograph (1911 and 1934), climate,
and land use.
Vernon area (Apache County). Climate, land-
ownership, and land use.
Whitewater Draw (Cochise County). Climate, land
use, hydrology, and soil quality.
Woodruff subarea (Navajo County). Water facilities.

California

Del Norte area (Del Norte County). Climate, flood
and drought hydrograph (1932 and 1933),
natural cover and land use, and landownership.
Hinckley Valley (San Bernadino County). Soil
quality and ground water.
Sierra Valley (Lassen, Plumas, and Sierra Counties).
Climate, topography, names of landholders,
and irrigated areas.
South Central Valley area (Merced, Fresno, Tulare,
and Kern Counties). Land classification and
ground water.
Walker River (Mono County, Calif., and Lyon,
Mineral, and Douglas Counties, Nev.). Land-
ownership and land use.

Colorado

Animas River (La Plata County, Colo., and San
Juan County, N. Mex.). East Side irrigation
ditch.
Dry Cimarron Basin (Baca County, Colo., and
Cimarron County, Okla.). Water facilities.
Gypsum Creek (Eagle County). Climate and
hydrology.
Little Dolores River (Mesa County, Colo., and
Grand County, Utah). Climate.
North Fork of Gunnison River (Delta and Gunnison
Counties). Types of farming.
Republican River Basin (Colorado, Kansas, and
Nebraska). Geology, hydrology, population
loss (1930-40), physiography, vegetation,
climate, intensity of drought (1930-36),
growing season, irrigable land by subareas,
types of farming, wheat yield average by
county, value of land by county, range-
carrying capacity, and soil groups.
Yampa River (Routt and Moffat Counties). Land
use and classification.

Idaho

Challis-East project (Custer County). Water facilities.
Darby Creek segment (Teton County). Water use.
Little Lost River (Custer and Butte Counties).
Water facilities.
Malad River (Oneida County). Climate and reservoir
and damsites.
Opaline Irrigation District (Owyhee County). Land
use.
Raft River (Cassia County). Ground water.
Teton drainage basin (Teton County). Soil profile,
climate, hydrography chart, ground water,
land use, water rights, and preferential water
use.

Kansas (See also Colorado)

Arkansas Valley (western Kansas). Climate and recommended land use.

Crooked Creek (Meade County). Hydrology and soils.

Montana

Big Muddy Creek (Sheridan and Roosevelt Counties). Land types, cultivated land, grassland types, and recommended land use.

Little Beaver Creek (Fallon and Carter Counties). Ground water, land classification, grazing capacity, and types of farming.

Northern Dawson County. Climate, land classification, ground water, range-carrying capacity, wheat yields, location and size of farms, landownership, and recommended land use.

Pipestone Creek (Jefferson County). Land use, grassland types, landownership, and names of landholders.

Shotgun-Clover Creek (Roosevelt County). Climate, land use, range resources, and recommended land use.

Teton River (Teton County). Ground water, soils, and types of farming.

Nebraska (See also Colorado)

Hat Creek (Sioux County). Land classification and ground water. Lodgepole Creek (Cheyenne and Deuel Counties, Nebr., and Laramie County, Wyo.). Ground water, land types, vegetation, and land use.

Niobrara River (western Nebraska, and Niobrara County, Wyo.). Land use, ground water, and grassland types.

Platte Valley (central Nebraska). Irrigation.

Nevada (See also California)

Pahranagat Valley (Lincoln County). Soil quality. Steptoc-Spring Valleys (White Pine County). Climate, irrigated land, and landownership.

Upper White River (Nye and White Pine Counties). Landownership.

New Mexico

Alamosa-Rio Cuchillo area (Socorro and Sierra Counties). Land use and landownership.

Chaves and Eddy Counties. Distance to other irrigated areas and to market centers, physiography, climate, geology, ground water and aquifer, capacity of wells, land classification, and water resources.

Sangre de Cristo grant (Taos County). Historical growing seasons and land use.

Hammond, Inc., project (San Juan County). Land classification and landownership.

Lea County shallow water district. Ground water, irrigable lands, and land use.

Mora River (Mora and San Miguel Counties). Climate, hydrology, land use and landownership.

Ocate Creek (Mora and Colfax Counties). Climate and hydrography.

Quay County. Geology, ground water, and average costs for irrigation.

Rio Moquino watershed (Valencia County). Landownership and land use.

Rita Blanca drainage basin (Union County, N. Mex., and Dallam County, Tex.). Quality of land, recommended farming areas, land use, and ground water.

Santa Cruz watershed (Santa Fe and Rio Arriba Counties). Landownership, land use, and hydrology. Map of Cordova community, Rio Arriba County.

Umbarger Reservoir (Quay County, N. Mex., and Deaf Smith and Randall Counties, Tex.). Drainage area.

Upper Pajarito Creek (Quay County). Proposed Newkirk-Pajarito Reservoir.

Upper Rio Puerco (Sandoval County). Geology.

North Dakota

Cedar River (southwestern North Dakota). Dam-sites.

Heart River (Stark and Billings Counties). Climate, land types, public facilities, tax status, cultivated land, and recommended farming areas.

Little Muddy watershed (Williams County). Land use (1933), recommended farming areas, public facilities, farmsteads, types of soils, and erosion areas.

McKenzie area (McKenzie County). Climate, land classification, land use, public facilities, and Federal land projects.

Oklahoma (See also New Mexico)

Harper and Beaver Counties, S.D.R. & I. Co.
Names of landholders, land types, and geology.

North Canadian River Basin (Cimarron and Texas Counties). Geology, ground water, types of farming, and irrigable land.

Oregon

Applegate River (Josephine County). Water facilities.

Burnt River (Baker County). Land and water use.

Goose Lake area (Lake County). Climate at Lakeview, Cottonwood and Drews Creek discharge, irrigable land, and water-right lands.

North Powder River (Union County). Names of landholders.

Trout Creek (Jefferson County). Land and water use.

Yamhill River (Yamhill and Polk Counties). Water facilities.

South Dakota

Bear Butte, Elk, and Boxelder Creeks (Lawrence and Pennington Counties). Ground water.

Cherry-Sulphur Creek (Meade County). Land types, ground water, range carrying capacity, publicly owned lands, land use and operating units, tax status, topography, and recommended land use.

Crow Creek (Buffalo, Jerauld, and Hand Counties). Ground water, land classification, grazing capacity, types of farming, and landownership.

Rabbit and Thunder Butte Creeks (Perkins County). Geology, ground water, and land use.

Water-Land Resources and Problems in South Dakota. (See introduction to this entry, p. 38).

Texas (See also New Mexico)

Central Colorado River Watershed (Coleman and Callahan Counties). Climate, flood frequency, dwellings, farms, geology, and ground water.

Llano-Estacado area (Northwestern Texas). Ground water.

Toyah Creek (Reeves County). Geology and recommended land use.

Utah (See also Arizona)

Ashley Valley (Uintah County). Precipitation and runoff and irrigated lands.

Delta area, Lower Sevier River (Millard County). Irrigated lands.

Erda (Tooele County). Ground water.

Nebo area (Juab and Utah Counties). Climate, land use, ground water, irrigable lands, and drought and flood hydrograph (1934 and 1936).

Pahvant area (Millard County). Climate and land use.

Sanpete area (Sanpete County). Climate, elevation, and land use.

Upper Muddy River (Emery and Sevier Counties). Irrigated lands.

Willow Creek (Sanpete and Sevier Counties). Willow Creek Reservoir and irrigated lands.

Wyoming (See also Nebraska)

Crazy Woman Creek (Johnson County). Climate, ground water, land use, vegetation, and landownership and operating units.

Crow Creek (Laramie County). Wells and farms in the Carpenter area.

Nowood Creek (Big Horn and Washakie Counties). Land types, vegetation, grazing capacity, ground water, and landownership.

Popo Agie Basin (Fremont County). Geology, soils and reservoir sites.

Salt River (Lincoln County). Land types, land use, grassland types, and landownership.

X. Maps of the Western States Prepared by State Land Planning Consultants (Entry 241)

Arizona

1. Map AB-1. Problem areas (1934). Symbols are keyed to the LU-30 report.
2. Map AB-1 (revised). Problem areas (1935). Areas shown include the following: overdeveloped and overpopulated irrigated land; areas with arrested water development; areas with financial problems; alkali and unproductive irrigated lands; submarginal dryfarming, forest, and grazing lands; overgrazed rangelands; and submarginal land where rumors of future irrigation development have caused unwise homesteading.
3. Map A-2. (n.d.) Shows 64 unidentified areas apparently keyed to the report.
4. Map A-3. Areas available for settlement or closer settlement and type of reclamation needed (1935).
5. Map B-1. Vegetation cover types (1935). Shows desert vegetation, grasslands, and pine, pinon-juniper, and chaparral-oak woodlands.
6. Map B-2. Extent of erosion on rangelands (1935). Includes boundaries of major watersheds.
7. Map B-3. Public lands in Arizona (1935).
8. Significant areas of settlement in Arizona from 1930 to 1935 (n.d.). Accompanies LU-35 report. Consists of inset maps of main irrigated areas showing by dots the number of new farm families; also shows areas served by privately owned pumping plants.
9. Supplemental problem areas map (1937). Shows areas where farming should be replaced by other uses; areas where 20 percent of the farms are too small to provide adequate living; and areas available for settlement, including acreages of irrigation projects.

California

The following are maps of the State. Most are manuscript maps (scale 1:500,000), but smaller-scale photostatic copies colored by hand are also included. In a few cases only a photostat exists.

- dates of last killing frost in spring, normal growing season, and mean annual maximum temperature.
3. Erosion (1934). Shows types and intensity of erosion.
4. Areas of significant erosion (1936). Shows areas of moderate or severe erosion.
5. Natural cover and agricultural land use (1934). Shows irrigated and dry farmlands; grazing, alpine, watershed, deforested, and desert areas; and juniper and pinyon, pine fir, douglas fir, ture fir, redwood, noncommercial, and rocky forested lands.
6. Major nonurban land use problem areas (1934). Shows 89 areas with problems such as erosion, overgrazing, need of drainage, falling water tables, economic instability, and inappropriate farm size or tenure. Includes recommended changes. Keyed to LU-30 report.
7. Areas where 20 percent of farms are too small for economic management (problem area 3B; 1936).
8. Recommended land use changes (1936). Shows arable farm and stock ranch areas which should be either replaced by forests, wildlife refuges, or recreational land such as parks or set aside because of high watershed values. Many of the specific areas shown are also keyed to the LU-30 report.
9. Areas suitable for closer settlement (1934). Indicates types of adjustments needed for settlement.
10. Areas suitable for closer settlement (1936). Prepared in connection with migration from the Dustbowl. Shows areas suitable, unsuitable, and with limited opportunities for settlement.
11. Population density (1934). Based on 1930 judicial township data. Contains 11 categories of density.
12. Nonurban areas in which settlement increased or decreased from 1930 to 1935 (1936). Prepared from questionnaires; part of the LU-35 report.
13. State and county ownership of lands (1934). Includes lands owned by the University of California.
14. Federal landownership (1935). Shows types of public land and acreage of public domain in

- each township. A second map shows acreage only.
15. Landownership and intensity of management of publicly owned lands (1934). An incomplete map; a second version shows only intensity of management.
 16. Recommended permanent use and ownership of land (1936). Prepared by the U.S. Forest Service.
 17. Map marked "L. C. Gray's State and Federal Land Map" (n.d.). Shows existing and proposed types of public ownership; annotated to show duck hunting and elk and deer concentration areas.
 18. Recreation and game areas (1934). Shows parks, national forests, primitive areas, deer and quail hunting ranges, and heavily used and general recreation areas. Included are two slightly differing versions.
 19. California park system (1936). Shows parks, beaches, and historical monuments.
 20. Boundaries of active irrigation districts (1936).
 21. Watersheds of existing and proposed reservoirs (1934). Shows acreage and square mileage of watersheds.
 22. Value of farmland and buildings per acre by judicial townships (1936). Based on information from the 1930 census. (See also entries 76 and 256.)
 23. Seasonal range use (1935). Shows the following ranges and the seasons they are most used: mountain (summer), coast (all year), valley (fall, winter, spring), and desert (winter).
 24. Size of farms (1936). Shows by judicial townships 10 categories of average farm size. Based on the 1930 census.
 25. Types of farms (1936). Fifteen dot maps based on the census of 1930 showing the number and location of the following types: all farms and animal specialty, cash-grain, cotton, dairy, crop-specialty, fruit, general, miscellaneous, part-time, poultry, self-sufficient, stock, and truck farms. One of the maps shows a composite of above types of farms. (See also entry 255.)
 26. Livestock distribution maps (1936). Five dot maps showing the numbers and locations of beef cattle, dairy cows, sheep, swine, and chickens. Based on the 1930 census. (See also entry 255.)
 27. Crop yields (ca. 1934). Three maps showing units per acre of sugar beets, rice, and wheat in selected localities of the State, particularly the Central Valley and coastal areas, based on averages of several years.
 28. "Hart-Livestock Map" (n.d.). No legend. Marked "see report."
 29. "Appendix Map" (n.d.). Shows 110 numbered but unidentified areas.
 30. Incomplete maps. Included are a map showing carrying capacity of grazing land and marked "Sampson & Malmstein map," a map marked "areas to vacate - LU-30 report," and a map marked "available lands."
- The following are large-scale (1 inch to 4 miles) sectional manuscript maps covering only the Great Interior Valley, the agricultural areas of southern California, and other selected localities. Some of the maps are fragmentary.
31. Lands available for new or closer settlement (1936). Shows land for sale by: credit agencies, irrigation districts, subdivision agencies, and realtors. Also shows land not for sale.
 32. Natural cover and agricultural land use (1934).
 33. Length of normal growing season (1935).
 34. Wheat and sugar beet yields in selected localities (ca. 1934).
 35. Reclamation, drainage, and other districts in the Central Valley (1936).
 36. Active irrigation districts in the Central Valley (1936).

Montana

The first three of the following are photocopies of maps and are partly illegible.

1. Map 1. Problem areas (1936). Symbols keyed to LU-30 report.
2. Map 2. Number of farms, acreage in farms, and estimate of change in operating units resulting from the "1-a adjustment" as outlined in report (1936).
3. Map 4. Public lands, land utilization and resettlement projects, and possible areas available for closer settlement (1936).
4. Recommended land use in Montana (1936). Indicates recommended types of ownership and crop and livestock development. Also shows existing irrigated areas.

Nevada

1. Problem areas (1934). Three manuscript versions showing public lands as well as problem areas keyed to the LU-30 report. One version indicates resettlement areas.
2. Erosion and irrigated land (1934). Shows areas of slight and severe erosion, irrigated and irrigable lands, public lands, and problem areas.
3. Average precipitation of Nevada (1936). Submitted in 1938 as a supplement to the LU-45 report concerning an inventory of basic land use planning data and maps. (For the report see Vivian Wiser, comp., *Records of the Bureau of Agricultural Economics*, PI 104, entry 173.)

New Mexico

1. Exhibit A. Problem areas (1934). Shows specific local problem areas keyed to the LU-30 report, overgrazed range areas, and public lands.
2. Exhibit C. Irrigation districts and projects (1934). Included are locations of diversion dams.

Oregon

1. Location of new farm settlement in Oregon from 1930 to 1936 (n.d.). A dot map with each new farm indicated by one dot. Part of LU-35 report.

Utah

1. Problem areas (n.d.) Shows general land use, including dry and irrigated farmland and un-

grazed areas. Also shows pumping and watershed areas and problem areas such as eroded land and submarginal dry and irrigated land.

2. Land use adjustment problem areas (1937). Maps show information similar to map No. 1 above, with the addition of locations of adjustment projects and areas with problems caused by inadequate farm unit size and isolated agricultural communities.
3. Recreational map of Utah. (1934). Shows existing and proposed public lands, including national forests and monuments, game preserves, State parks, and scenic roads.

Washington

1. Problem areas (1934 and 1935). Manuscript maps, including such categories as areas to be removed from agricultural use because of low productivity, areas where farms are too small, overgrazed and overcapitalized areas, eroded areas, areas in financial distress, and areas needing public control. The 1935 map shows proposed locations of land utilization projects.
2. Areas available for settlement (1934 and 1935). Manuscript maps indicating types of reclamation needed for settlement.
3. Public-domain and State-owned lands (1935). Large-scale sectional maps showing information by operating units.

XI. Maps Relating to Water Facilities Plans in Arizona, California, and Utah (Entry 291)

Arizona

Upper San Pedro watershed (Cochise and Santa Cruz Counties). 1938. Base maps annotated to show new construction.

Verde River Valley. Base map of the Yavapai County portion showing landholders and physical features in 1920 and annotated in 1937 to show the Central Verde irrigation project, new irrigation ditches, and a diversion dam.

Verde River watershed, Camp Verde subarea (Yavapai County). n.d. Roads and irrigation ditches.

Whitewater Draw drainage basin (Cochise and adjacent counties). ca. 1940. Base map.

California

Fallbrook area (San Diego County). 1938. Maps showing crops grown, landholders and operating units, and vegetation cover on the Rancho Guejito.

Kaweah-Tule River Area. n.d. Base map.

Sierra Valley (Lassen, Plumas, and Sierra Counties). 1940. Base map showing irrigated lands.

Upper Pit River area. 1941. Base map showing irrigated lands, water facilities, and soil ratings.

Utah

Delta area of the Lower Sevier River. ca. 1940. Maps showing landownership and land classification.

XII. Maps Relating to Flood Control Examinations in Arizona, California, Idaho, Nevada, and Utah (Entry 293)

Arizona (See also Nevada.)

Williams River watershed. 1940. (Also called Bill Williams and Big Sandy.) A bound series of 21 photographs and small-scale maps. The maps show the watershed's location (covering parts of Mojave, Yavapai, and Yuma Counties), geology, and soil zones. They also show flood damage areas, suggested locations for remedial measures against floods, sediment source areas, natural vegetation and topography, and landownership. The photographs show the landscape of the area and the Parker Dam on the Colorado River at the mouth of the basin.

California

Carson River watershed (California and Nevada). 1942. Base map showing precipitation, extent of flood plain, natural plant cover, farmland, and landownership patterns.

Los Angeles area. Maps showing erosion in the Santa Monica Mountain drainage area.

Middle Sacramento River Valley and Butte Basin. ca. 1942. Base map showing precipitation, natural plant cover, irrigated and nonirrigated land, and landownership patterns. A map of Butte County shows communities and nonagricultural lands.

Russian River drainage basin (Mendocino and Sonoma Counties). n.d. Base map.

San Diego County. 1939. Maps showing watershed boundaries and critical flood areas in San Luis Rey, San Diego, and Tia Juana River Basins. Base map of proposed Serrania-San Diego project area.

Truckee watershed (California and Nevada). 1942. Base map showing landownership patterns.

Idaho

Coeur d'Alene River Valley. 1940. Maps showing soils, drainage, land use, and land capabilities.

Weiser River watershed (Adams and Washington Counties). n.d. Base map showing precipitation, soils, land use, natural cover, State-owned and national forest lands, flood and silt source areas, and flood damage areas.

Nevada

Lower Virginia Valley (Clark County, Nev., and Mohave County, Ariz.). 1940. Maps showing communities and irrigated and overflow areas.

Utah

Sevier Lake watershed. 1939. Map showing subareas and geological features in two subareas.

Subject Index

References in plain type are to numbered entries; those in bold face are to page numbers.

Abandoned farms

Appalachian States (1942), 162

Arizona (1931), 216

Perkins County, S. Dak. (1936-37), 105

Administrative regions, *see* Regions, administrative

Age composition in Pacific Coast States (1930-60), 209

Age distribution in California (1940), 196

Agricultural problem areas, *see* Problem areas, agricultural

Agricultural regions, *see* Regions of the United States

Agriculture, activities of the U.S. Department of

Appalachian States (1942), 162

Southeastern United States (1938), 190

World (ca. 1925), 63

See also Flood control program; Land utilization program; Water facilities program; and name of specific agency

Agrostology, Division of, 3

Aid to farmers

Appalachian States (1942), 162

Seward County, Kans. (1939), 106

Spokane County, Wash. (1939), 97

United States (1937-39), 50

Western United States (1933-39), 44, 208

Aldous, A. E., 32

All-American Canal, 93

Anderson, Wilhelm, 112

Atlas of Agricultural Information - Appalachian Region (1942), 162

Atlas of American Agriculture (1915-36), 6-8, 19, 152, 231, 6, 27

Atlas of the Great Plains (1925-30), 84, 186

Automobiles

On farms in Appalachian States (1942), 162

On farms in United States (1920-30), 135

Survey of expenditures on, in Great Plains and Pacific Northwest (ca. 1940), 45, 213

Baker, O. E. 56, 84, 152, 3, 6 ff., 27, 28 ff.

Barnes, C. P., 98, 100, 104, 154, 168, 24

Barrows, Harlan H., 199

Bidwell, Percy, 13, 19

Boundaries

Historical county boundaries in California, 252

Historical county boundaries in Georgia, 192

Internal political boundaries in South America (1900-1910), 28

Internal political boundaries in foreign areas and in the United States (1920-40), 35

Bureau of Reclamation, projects in the Central Valley, Calif. (1940-46), 199

"Carolina Bays," 169

Citrus groves in Los Angeles-San Bernardino area, California (1940), 199

Clawson, Marion, 199

Climate

California (1935), 241

Frost-free periods

Essex County, Mass. (ca. 1940), 73

United States (1953), 168

Historical

Big Muddy Creek area, Montana, 182

Garnett and Manassa, Colo., 182

Harney Basin, Oreg., 69

Havre, Mont., 69

Northeastern Nevada, 226

Influence on crop yields

Fresno County, Calif. (ca. 1942), 215

North Dakota (ca. 1931), 69

Precipitation

Arizona (1936-38), 246

Nevada (1936), 241

South America (1918-21), 26, 28

South Dakota (ca. 1940), 183

United States (1899-1938), 37, 139

Selected watersheds in Western and Great Plains States (ca. 1940), 183

United States (1895-1914), 7

Coal, *see* Minerals

Colby, Charles C., 163

Commodity Credit Corporation loans in United States (1937-38), 50

Cost of living, rural, by State (1938), 53

Cotton gins in Arkansas (ca. 1935), 57

- Country estates and rural institutions in United States (1930), 134
- County boundaries, *see* Boundaries
- County funds, disbursement, in California (1929-39), 198
- County land use planning program (1939-41), 70-73
- Crawford, L. A., 199, 221
- Credit, *see* Aid to farmers; Production credit associations
- Crop failure
 - United States (1934), 141
 - United States, by type of ownership (1934), 145
- Crop reporting districts in United States, 52
- Crop yields
 - Arkansas (ca. 1935), 59
 - Arkansas, Louisiana, Washington, and Chouteau County, Mont. (1929-35), 109-I
 - California (1934), 241
 - Fergus County, Mont. (ca. 1936), 104
 - Fresno County, Calif. (ca. 1942), 215
 - Great Plains (1926-48), 169
 - Historical corn and wheat yields in selected States, 121
 - North Carolina (1935), 109-D
 - North Dakota, influence of weather on (ca. 1931), 69
- Croplands
 - Alabama (1934), 90
 - Appalachian States, cropland/population ratio (1942), 162
 - Pacific Northwest (1941), 193
 - South Dakota (1935), 94-95
 - United States (1945), 165
 - Changes in cropland harvested (1909-29), 131
 - Cropland/population ratio (1880-1960), 169, 229
 - Historical growth (1880-1960), 229
 - In use or lying fallow (1926-34), 120, 140
 - On farms (1929-35), 132
 - Percentage of land used for (ca. 1959), 169
 - Submarginal (1933), 98, 100
- Crops
 - Distribution
 - Alabama (1929-35), 90
 - Appalachian States (1942), 162
 - Austria-Hungary, Balkans, Greece, and Western Turkey (1919), 29
 - Benton County, Oreg. (1939-40), 276
 - California (1930-39), 218, 241, 255
 - Foreign areas (1917), 24
 - Josephine County, Oreg. (1936-38), 277
 - Maine (1940), 85
 - New Hampshire (1935-36), 109-I
 - Sacramento Valley, Calif. (1944), 200
 - Santa Cruz County, Calif. (1936-41), 259
 - Santa Fe County, N. Mex. (1930), 273
 - South America (1918-21), 25, 27-28
 - Southeastern United States (1930-35), 81
 - Western United States by county (1930), 236
 - United States (1839-1935), 2, 19, 21, 24, 121
 - Yuma County, Ariz. (1937), 73
 - Farm income by type of, in California (1910-43), 196
 - Land favorable and unfavorable for in United States (1953), 168
 - Marketing of, in United States (1934-39), 55
 - Seasonal labor by type of, in Santa Barbara County, Calif. (ca. 1941), 211
 - Soil-protecting, in Mississippi River Basin (1934), 80
 - Types
 - Canning peas in Washington and Oregon (1942), 278
 - Cotton in Arkansas (1879-1939), 86
 - Cotton in world (1934), 67
 - Fruits and vegetables in United States (1936), 54
 - Grasses and forage crops in United States (ca. 1905), 3
 - Hay investigations in United States (ca. 1908), 4
 - Tobacco growing districts in United States (1932), 62
 - Wheat, international trade in (1910-14), 30
 - Wheat, planting dates for in United States (ca. 1925), 68
 - Wheat, by types, in United States (1919), 23
- See also* Livestock
- Cultural regions, rural, in United States (1940), 41
- Dairy products, distribution in United States (1839-1929), 20, 122
- Debts, *see* Farm income and expenditures
- Department of Agriculture, *see* Agriculture, U.S. Department of
- Drainage
 - Chippewa Indian lands in Northern Minnesota (ca. 1915), 170
 - Farmlands with artificial drainage in United States (1930), 137
 - Plans and acreage in United States and Virginia (1922-24), 170
 - Southeastern Arkansas (1941), 170

- North Carolina (1945) and Dismal Swamp of North Carolina (1916), 170
- Drainage basins
 Michigan (ca. 1935), 119
 New Jersey (1900), 119
 United States (1927), 109-D
 Utah (1943-44), 287
 Western United States (1940), 177-178
- Drainage pattern (rivers) in United States (1915), 6, 172
- Drought in Republican River Basin (Colorado, Kansas, and Nebraska, 1930-36), 182-183
See also Crop failure
- Dry farming areas
 United States (1957), 172
 Utah (1939-46), 85, 288
See also Irrigated lands; Irrigation
- Education levels of rural population
 Appalachian States (1942), 162
 United States (1910), 8
- Electricity on farms
 Appalachian States (1942), 162
 United States (1935), 135
See also Rural Electrification Administration
- Employees of Bureau of Agricultural Economics (1924), 33
- Employment
 Agricultural and manufacturing in United States (1930), 124
 Alabama (1929), 90
 Appalachian States (1942), 162
 California (1920-43), 197
 Migrants in need of, in Western States (1935-40), 211
 Peak periods of seasonal labor in United States, by region, 77
 Types of farm labor in United States (1930), 144
 Wage ceilings for grape pickers in California (1942), 214
See also Occupations; Unemployment
- Erosion
 Appalachian States (1942), 162
 Arizona (1935), 241
 Arkansas (1934), 160
 California (1934-36), 241
 Lewis County, W. Va. (ca. 1940), 73
 Missouri (1935), 160
 Nevada (1934), 241
 United States, SCS surveys, by State (1934), 109-D
 Utah (ca. 1935), 241
 Washington (1934-35), 241
- Western States, selected watersheds (ca. 1940), 293
- Ethnic groups
 Hand County, S. Dak. (1940), 96
 Wisconsin (1940), 47
 United States (1910), 8
- Expenditures, Federal (1940), 44, 208
See also Aid to farmers; Farm income
- Falconer, John, 13, 19
- Farm abandonment, *see* Abandoned farms
- Farm acreage, changes in United States (1920-35), 130
- Farm animals, *see* Livestock
- Farm credit, *see* Aid to farmers; Production credit associations
- Farm finance, *see* Farm income; Production credit associations
- Farm forestry program in California, 221
- Farm income
 Appalachian States (1942), 162
 California, by types of crops (1910-43), 196
 Expenditures for farm labor in United States (1930), 144
 Fergus County, Mont. (ca. 1936), 104
 Income and expenditures in United States (1920-30), 146
 Rural cost of living in United States by State (1938), 53
 Survey on, in Great Plains and Pacific Northwest (ca. 1940), 45, 213
 United States by county (1930), 75
See also Aid to farmers; Production credit associations
- Farm labor, *see* Employment
- Farm machinery, United States (1935), 135
See also Tractors
- Farm population, *see* Population distribution
- Farm products
 Alabama (1929-35), 90
 Appalachian States, value (1942), 162
 California, value (1930-39), 196
 United States (1934-39), 55
 Livestock and dairy products (1839-1929), 20, 122
 Nursery and forest products (1929), 123
 Sold (1919-35), 121, 146
- Farm real estate, *see* Real estate
- Farm relief, *see* Aid to farmers
- Farm Security Administration
 Activities in Appalachian States (1942), 162
 Farms in Sutter County, Calif., 225

- Payments made in lieu of taxes on FSA property in United States (1942), 174
See also Resettlement Administration
- Farm tenancy and sharecropping, *see* Tenancy and sharecropping
- Farms
 Areas recommended for larger farms in United States (1935), 100, 109-A
 Distribution
 By size in California (1930), 241
 By size in United States (1930-35), 127, 129
 Changes in United States (1910-35), 128-129
 United States (1860-1920), 14-15
 Land in farms in United States (1850-1910), 16
 Land use on farms in United States (1929-35), 132
 Types
 Appalachian States (1942), 162
 Argentina, Uruguay, and Chile (1918-21), 25
 Arkansas (1941), 161
 California (1930-39), 218, 241, 255
 Columbia Basin project, Washington (1939-40), 207
 Louisiana (1937), 157
 New Jersey (ca. 1940), 73
 North central coast of California (1930), 221
 Oregon (1935), 220
 Pacific Northwest (1935-37), 238
 Sacramento Valley, Calif. (1930), 199, 221
 San Joaquin Valley, Calif. (1930-41), 199, 221
 Southern United States (1941), 112
 United States (1930-49), 56, 109-M, 120, 134
 Unemployment on farms in United States (1937), 78
 Value of farms in Western States during World Wars I and II, 237
See also Dry farming areas; Truck farms
- Federal agencies, *see* Agriculture, U.S. Department of, and names of specific agencies
- Federal Aid, *see* Aid to farmers
- Federal land management activities (1939-46), 158
- Fenneman, Nevin, 109-M
- Finance, *see* Farm income; Production credit associations
- Finch, V. C., 24
- Flathead Indian Reservation, Mont., 270
- Flood control program
 California and Nevada (1941), 292
 Southwestern United States (1940), 286
 United States (1936-39), 175, 187
 Western United States (1937-41), 292
- Flood plain zoning in Los Angeles area, California (1941), 294
- Floods in Yazoo area, Mississippi (1940), 82
- Food distribution programs in Appalachian States (1942), 162
- Forage resources, *see* Grazing lands
- Foreign areas
 Activities of U.S. Department of Agriculture in (ca. 1925), 63
 Agriculture in (1917), 24
 See also name of area in geographic index
- Foreign-born rural population in United States (1910), 8
- Forest products
 California (1939), 218
 Commercial firewood production in New Hampshire (1935-36), 109-I
 Forest-product farms in United States (1930), 134
 Lumber mills in Benewah County, Idaho (1937-38), 266
 Lumber mills in California (ca. 1937), 257
 United States (1929), 123
- Forests
 Agriculture in originally forested counties of Eastern United States (1929-34), 130
 Cleared land in North Carolina, 118
 Conditions of in Yazoo area, Mississippi (1940), 82
 Distribution
 Austria-Hungary (1919), 29
 Meigs County, Tenn. (1936-37), 110
 New Jersey (1900), 119
 Northern Alabama (ca. 1940), 118
 Northern Arizona (ca. 1920-27), 109-C
 Oklahoma (1899), 118
 Seattle and Takoma areas, Washington (1897), 1
 United States (1950), 165
 Farm-forestry program in California, 221
 Forest and grassland climax areas in Eastern United States, 38
 Mark Twain National Forest, Mo. (ca. 1940), 73
- Types
 Alabama (1934), 109-C
 Florida (1934), 109-C
 Georgia (1934), 109-C
 Iron County, Mich. (1930), 109-C
 Maine (1940), 85
 Mississippi (1934), 109-C
 New England (1942), 118
 Oklahoma (1940), 160
 Southern New Hampshire (1906), 119
 Spokane County, Wash. (1939), 97
 United States (1926-31), 120

- Wisconsin (1927), 118
 Woodland pasture on farms in United States (1929-35), 132
 Franklin, _____, 57
 Frost, *see* Climate
 Fuhrman, _____, 224
- Gardell, C. P., 104, 39
Geography of World's Agriculture (1917), 24
 Geology
 Arkansas (1929-41), 160-161
 Missouri (1939), 160
 Oklahoma (1942), 113
 Selected watersheds in Western and Great Plains States (ca. 1940), 183
 United States alphabetically by State (1876-1939), 119
 See also Geomorphology; Minerals
 Geomorphology
 California, Michigan, Minnesota, Nevada, New York and Wisconsin (1905-35), 119
 Charlevoix County, Mich., (ca. 1940), 73
 Natural land cover
 California (1934), 109-C, 241
 Florida, Illinois, Indiana, Louisiana and Wisconsin, 150
 United States (1933-53), 109-M, 154, 165, 168
 Physiographic regions
 Appalachian States (1942), 162
 Arkansas (1941), 161
 Kentucky (ca. 1932), 60
 Oklahoma (1912), 160
 South Central United States (ca. 1941), 160
 United States (1930), 109-M
 Selected watersheds in Western and Great Plains States (ca. 1940), 182-183
 Topographic relief
 California (1934), 241
 Colorado (1913), 119
 Savannah River watershed, Georgia (1939), 191
 Southern Appalachian region (1933), 155
 Southern California, 202
 United States (1915), 6; 169
 Upper Peninsula of Michigan (1912), 119
 See also Geology; Vegetation
 Glaciation in United States, 169
 Goldsmith, Walter R., 199
 Goldweiser, E. A., 8
 Government activities, *see* Aid to farmers or name of specific agency
 Grass
 And forage crops in United States (ca. 1905), 3
 Grassland and forest climax areas in Eastern United States, 38
 Grassland types in selected watersheds in Western and Great Plains States (ca. 1940), 183
 See also Grazing lands; Vegetation
 Gray, L. C., 241 (map "California-17"), 20, 39
 Grazing lands
 Arizona (ca. 1920-27), 149
 Carrying capacity
 North Dakota, South Dakota, and Montana (1922), 32
 Selected watersheds in Western and Great Plains States (ca. 1940), 183
 United States (1926-31), 120
 Developed by wells and windmills in Western United States (1905), 164
 Erosion on rangelands in Arizona (1935), 241
 North Dakota, South Dakota, and Montana (1922), 32
 Northwestern Nebraska (1920), 31
 On farms in United States (1935), 132-133
 Overgrazed lands in New Mexico and Washington (1934-35), 241
 Seasonal movement of sheep in Intermountain States (1938-39), 57
 Seasonal use of grazing lands
 California (1935), 241
 Western United States (1905, 1947), 164
 United States (1953), 168
 See also Grass
 Great Smoky Mountains National Park, submarginal lands proposed for Government purchase (ca. 1931), 103
 Greisinger, Philip, 244, 249
 Ground water
 Irrigation from in Western United States, 179
 Los Angeles area, California, 263
 San Joaquin Valley, Calif. (1923-42), 199
 Selected watersheds in Western and Great Plains States (ca. 1940), 182-183
 See also Irrigation; Water facilities
 Growing season, *see* Climate
- Haas, G. C., 2
 Haggerty, J. J., 24
 Hainsworth, R. G., 24, 2, 6
 Hartman, W. A., 484
 Hochmuth, _____, 57
 Hollands, H. F., 222
 Horton, _____, 50

- Hospitals and physicians in Appalachian States (1942), 162
See also Medical care
- Housing
 Conditions in Appalachian States (1942), 162
 Survey of expenditures for in Pacific Northwest and Great Plains (ca. 1940), 45, 213
- Hurd, E. B., 61, 199, 220-222
- Hydroelectric plants
 Appalachian States (1942), 162
 Utah (1939), 288
- Income
 California (1919-38), 195-196
 Per capita in United States (1929-34), 196
See also Farm income
- Indian lands
 Flathead Indian Reservation, Mont., 270
 Irrigation projects for in Arizona (1944), 244
 Northern Arizona (ca. 1920-27), 149
 Reservations in California (ca. 1935), 254
 Reservations in United States (1939-46), 158
- Industrial employment levels in California (1920-43), 197
- Industry
 Cotton gins in Arkansas (ca. 1935), 57
 Mineral industries in Arkansas (1930), 160
 Mineral industries in Illinois (1930), 109-D
 Rural, in United States (1940), 41
 War-related, in Pacific Northwest (1941-43), 194
See also Manufacturing
- International Institute (ca. 1925), 63
- International trade in wheat (1910-14), 30
- Irrigated lands
 Arizona (1935-44), 241, 243-245
 California (ca. 1940), 93, 196, 201
 Central and San Joaquin Valleys, Calif. (1940-46), 199
 Idaho, 219
 Lincoln County, Nev. (ca. 1940), 182
 Llano Estacado (High Plains) area, Texas (1948-57), 169, 172
 Lower Virgin Valley, Nev. and Utah (1940), 293
 Montana (ca. 1930-36), 83, 241
 Nevada (ca. 1922-44), 114, 205, 241, 244
 New Mexico (1930-34), 83, 241
 Northwestern United States (1941-43), 193-194
 Oregon (ca. 1930-43), 83, 194, 274
 Pinal County, Ariz. (1939-40), 248
 San Luis Valley, Colo. (1929), 119
 Santa Cruz County, Calif. (1936-41), 259
 Sierra Valley, Calif. (1940), 291
 Southwestern United States, 240
 Tieton Irrigation District, Washington (ca. 1937), 61, 222
 Tulare County, Calif. (1944), 260
 United States (1919-29), 138; (1950-53), 165, 168
 Upper Colorado River Basin (Colorado, Utah, New Mexico, and Wyoming, 1938), 289
 Utah (ca. 1930-46), 83, 85, 241, 243, 288
 Washington (1933), 206
 Western United States (1915), 5; (1930), 236; (1940), 179
 Wyoming (ca. 1936), 83
- Irrigation
 Intensity by county in Western United States (1930), 236
 Requirements in Western United States (1943), 180
 Surface and ground water in Western United States (ca. 1940), 179
See also Water facilities
- Irrigation Agriculture in the West* (1948), 165
- Irrigation districts
 Active, in California and Central Valley, Calif. (1936), 241
 New Mexico (1934), 241
- Irrigation facilities
 Central Valley, Calif. (1940-46), 199
 Llano Estacado (High Plains) area, Texas (ca. 1948), 169
 Los Angeles area, California, 263
 Oregon (1936-38), 274
 South Dakota (ca. 1940), 183
 Upper Colorado River Basin (Colorado, Utah, New Mexico, and Wyoming, 1938), 289
 Utah (1939), 288
 Yuma County, Ariz. (1941), 224
See also Water facilities; Wells
- Irrigation projects
 Columbia Basin, Wash. (1939), 207
 Owyhee, Malheur County, Oreg. (1935-37), 223
 San Carlos, Pinal County, Ariz. (1939-40), 248
- Japanese-Americans in Pacific Coast region (1940), 235
- Johnson, T. D., 2
- Kincer, J. B., 7
- Labor, *see* Employment
- Land
 Feed-producing capacity of in California and Western United States (ca. 1940), 196

- Improved, in United States (1850-1910), 17
- In farms in United States (1850-1935), 16, 132
- Influenced by subsurface minerals in Oklahoma (1942), 113
- Suitable for settlement in United States (1935), 100
- Value
 - California (1930-40), 241, 256
 - Clark County, Wash. (1937-38), 285
 - Josephine County, Oreg. (1937), 277
 - Republican River Basin (Colorado, Kansas, and Nebraska, 1935), 182-183
 - Southeastern United States by Negro and white tenure (1930), 81
 - United States by minor civil division (1930), 76
- See also* Cropland; Grazing land; Submarginal land
- Land classification
 - Alachua and Gilchrist Counties, Fla. (1936-37), 110
 - Chouteau County, Mont., 109-1
 - Clermont County, Ohio (ca. 1940), 73
 - Columbia Basin project, Washington (1939-40), 207
 - Covington County, Miss. (1940), 107
 - Dolores and Montezuma Counties, Colo., 85
 - Fergus County, Mont. (1936-40), 73, 104
 - Georgia (1936-37), 110
 - Great Plains (1930), 84, 109-J, 186
 - Key to maps of Resettlement Administration's Region V (Southeastern United States), 111
 - Meigs County, Tenn. (1936-37), 110
 - Pacific Northwest, progress chart, 239
 - Perkins County, S. Dak. (1936-37), 105
 - Rhea County and adjacent areas, Tennessee (1936), 108
 - Seattle and Takoma areas, Washington (1897), 1
 - Seward County, Kans. (1939), 106
 - South central Florida (ca. 1936), 74
 - Taney County, Mo. (ca. 1940), 73
 - Teton County, Mont. (1940), 73
 - United States (by State and county, 1939-41), 72, 109-J
 - Western and Great Plains States, selected watersheds (ca. 1940), 182-183, 291
 - Wise County, Tex., 109-C
- See also* Problem areas; Submarginal land
- Land classification program (1939-41), 70-73
- Land Economics, Division of, projects in Western United States (ca. 1940), 233
- Landownership types
 - Alabama (1937), 89
 - Arizona (ca. 1936), 109-E
 - Benton County, Oreg. (1939-40), 276
 - California (1934-35), 241
 - Carbon County, Utah, 280
 - Clark County, Idaho (1936-37), 269
 - Clark County, Wash. (1937-38), 285
 - Cochise County, Ariz. (1941), 249
 - Grays Harbor County, Wash. (1936), 284
 - Imperial Valley, Calif. (1936-39), 258
 - Louisiana (1934), 99
 - Marshall County, S. Dak. (1939), 73
 - Michigan (1934), 87
 - Mississippi (1934), 99, 109-E
 - Oklahoma (1939), 119
 - Pinal County, Ariz. (1939-40), 248
 - Platte County, Wyo. (1939), 73
 - Spokane County, Wash. (1939), 97
 - Teton County, Mont. (1937), 73
 - Tripp County, S. Dak. (1940), 73
 - United States, distribution of farms according to (1910-35), 145
 - Washington (1935), 241
 - Pend Oreille, Stevens, and Spokane Counties (1933), 109-E
 - Washington County, Colo. (1934), 85
 - Western and Great Plains States, selected watersheds (ca. 1940), 182-183, 291
 - Yazoo area, Mississippi (1940), 82
 - Yuba County, Calif. (1939-40), 261
- See also* Public lands; Tenancy and sharecropping
- Land planning consultants (1934-39), 99-100, 241
- See also* Land use planning
- Land resource areas of United States (1953), 168
- Land surveys, historical types in United States, 169
- Land tenure, *see* Landownership types; Tenancy and sharecropping
- Land use
 - Appalachian States (1942), 162
 - Arizona, 151
 - Arkansas (1941), 161
 - Benewah County, Idaho (1937-38), 266
 - Benton County, Oreg. (1939-40), 276
 - Braxton County, W. Va. (ca. 1940), 40
 - California (1934), 241, 109-C, 196
 - Clark County, Wash. (1937-38), 285
 - Coos County, Oreg. (1936), 275
 - Delta County, Colo. (ca. 1940), 73
 - Hubbard County, Minn. (1930), 109-C
 - Imperial Valley, Calif. (1936-39), 258
 - Josephine County, Oreg. (1936-38), 277
 - Kent County, Del., 39
 - Kootenai County, Idaho (1939), 268

- Llano Estacado (High Plains) area, Texas (ca. 1948), 169
- Montana, recommended (1936), 241
- New Mexico, 151, 159
- North Dakota, Burke, Burleigh, and Sargent Counties (1938), 95
- Oneida County, Idaho (1937-38), 267
- Oregon (1935), 220
- Petroleum County, Mont., 109-J
- San Jacinto watershed, Texas (1941),
- Santa Cruz County, Calif. (1936-41), 259
- South Central United States (ca. 1941), 160
- South Dakota (ca. 1940), 183
- Southeastern New Mexico (ca. 1948), 169
- Southern Appalachians (reference, 1933), 155
- Southwestern United States, 240
- Tripp County, S. Dak. (1938), 73
- United States (1950), 165, 167; alphabetically by State (1947-50), 166
- On farms (1929-35), 132
- Potential (1933), 154
- Recommended (1935), 100
- Utah (1933-34), 85
- Washington (1933), 85, 206
- Washington County, Colo. (1934), 85
- Western and Great Plains States, selected watersheds (ca. 1940), 182-183, 293
- Yazoo area, Mississippi (1940), 82
- Yuba County, Calif. (1939-40), 261
- Land use adjustment areas
- Southern United States (1941), 112
- United States and Region 7 (1940), 102, 232
- Land Use and Its Patterns in the United States* (1959), 169
- Land use planning
- County planning program (1939-41), 70-73
- Maps by consultants (1934-39), 99, 241
- Land-Use Planning Section, Resettlement Administration, 20, 41
- Land use problem regions in United States (1935), 101
- See also* Problem areas
- Land utilization program, 188-89
- Proposed projects in Washington (1935), 241
- Landforms, *see* Geomorphology
- Literacy of rural population in United States (1910), 8
- See also* Education levels
- Livelihood areas of United States (1943), 163
- Livestock
- Cattle distribution in Western United States (ca. 1905), 3
- Distribution
- Appalachian States (1942), 162
- Austria-Hungary, Balkans, Greece, and Western Turkey (1919), 29
- California (1930), 241, 255
- Foreign areas (1917), 24
- New Hampshire (1935-36), 109-I
- Santa Fe County, N. Mex. (1930), 273
- South America (1918-21), 25, 27-28, 65
- Southeastern United States (ca. 1936), 81
- United States (1839-1935), 19, 21, 24, 121
- Historical chart covering United States, Argentina, India, Russia, and Germany (1840-1923), 64
- Stock ranches in United States (1930), 134
- See also* Crops
- Livestock products
- Dairy products in United States (1839-1919), 20
- United States (1929), 122
- Wool production in United States (1900-1909), 22
- Loans to farmers, *see* Aid to farmers; Production credit associations
- Lobeck, A. K., 148
- Lumber mills
- Benewah County, Idaho (1937-38), 266
- California (ca. 1937), 257
- See also* Forest products
- Machinery on farms, in United States (1920-38), 135, 146
- Mangus, A. R., 41
- Manufacturing
- Appalachian States (1942), 162
- Employment in United States (1930), 124
- See also* Industry
- Marbut, C. F., 147, 152
- Marketing
- Appalachian States (1942), 162
- Distance to markets from Chaves County, N. Mex. (ca. 1940), 183
- United States (1934-39), 55
- Marschner, Francis J., 6-7, 19, 24, 98, 231, 3, 6, 31 ff.
- McClure, H. B., 4
- Medical care, survey of expenditures for in Pacific Northwest and Great Plains (ca. 1940), 45, 213
- See also* Hospitals and physicians
- Meteorology, *see* Climate
- Metzler, ———, 214
- Migrant workers
- Peak periods of seasonal labor in United States according to types of farming areas, 77

- Seasonal labor by types of crops in Santa Barbara County, Calif. (ca. 1941-42), 211
- Use of migrant labor camps in California and Arizona (1940), 211
- Western United States (1935-42), 211
- See also* Employment; Migration
- Migration
 - Families displaced from war purchase sites (1944), 79
 - Farmers residing on farms less than 1 year in United States (1935), 145
 - Historical interstate migration by States (1870-1930), 46
 - Population loss from Republican River Basin (Colorado, Kansas, and Nebraska, 1930-39), 182, 183
 - To Pacific Coast region (1930-39), 210
 - See also* Abandoned farms; Crop failure; Settlement
- Migration of sheep in Intermountain States (1938-39), 57
- Military installations, reservations, and zones in Pacific Coast States (1940-43), 194
- See also* Postwar planning; World War II
- Miller & Lux Corp. lands in California (ca. 1936), 264
- Minerals
 - Economic deposits in New York (1904), 119
 - Lands influenced by subsurface minerals in Oklahoma (1942), 113
 - Limestone in New York (1902), 119
 - Mineral industries in Arkansas (1930), 160
 - Mineral industries in Illinois (1930), 109-D
 - Oil and gas pipelines in Arkansas (1930), 160
 - Oil and gas wells in Meigs County, Ohio (ca. 1940), 73
 - Oil-, gas-, and coalfields in the Appalachian States (1942), 162
- Mines
 - Arizona by county (1931), 216
 - Coal and salt mines in Meigs County, Ohio (ca. 1940), 73
 - Southeastern New Mexico (1943), 159
- National parks, *see* Recreational lands
- National Resources Board, 112, 158, 193, 20, 41
 - Planning consultants, 99, 241
- National Resources Planning Board, 163
- "Natural land use areas of the United States" (1933), 109-M, 154
- Navy Department, land purchases in United States (1944), 79
- Negroes
 - Caswell County, N.C. (ca. 1940), 72
 - Farm population in United States (1935), 126
 - Historical distribution of slaves in United States, 18
 - Historical migration of Negroes to Pennsylvania (1870-1930), 46
 - Rural distribution in United States (1910), 8
 - Tenants and sharecroppers in Southeastern United States (1935), 81
- Nursery products in United States (1929), 123
- Occupations of heads of families in Western United States (1930), 212
 - See also* Employment
- Oil and gas, *see* Minerals
- Ownership of land, *see* Landownership types
- Parker Dam, Colorado River, photograph (1940), 293
- Pastureland, *see* Grazing land
- Perejda, A. D., 156
- Petroleum, *see* Minerals
- Physiographic regions, *see* Geomorphology
- Planning, agricultural, *see* Land planning consultants; Land use planning
- Poli, Adon, 235
- Political boundaries, *see* Boundaries
- Population changes
 - California (1919-43), 195-97
 - North Central United States (1930-40), 43
 - Pacific Coast area (1930-39), 210
 - Pacific Northwest (1940-43), 194
 - Republican River Basin (Colorado, Kansas, and Nebraska, 1930-40), 182-183
 - United States (1940-43), 36
 - See also* Population distribution
- Population/cropland ratio
 - United States (1880-1960), 116, 229
 - Western United States (1900-1960), 196
- Population density
 - California (1930), 241
 - California, by county (1870-1940), 253
 - Central Valley, Calif. (1940), 199
 - Southern Appalachians (1936), 155
 - United States (1790-1920), 13
 - World (ca. 1925), 153
- Population distribution
 - Appalachian States (1942), 162
 - Bakersfield, Calif. (ca. 1942), 262
 - California (1935-40), 92, 253
 - Farm population

- Changes in Southeastern United States (1930-35), 81
- Changes in United States (1930-35), 125
- Farm and nonfarm, Central Valley, Calif. (1940), 199
- Michigan (1934), 99
- Fergus County, Mont. (1936), 104
- Negro and white population
 - Caswell County, N.C. (ca. 1940), 261
 - United States (1910), 8
- Republican River Basin (Colorado, Kansas, and Nebraska, 1930), 182, 183
- Rural population
 - California (1939-40), 261
 - Central Valley, Calif. (1940), 199
 - United States (1790-1920), 8-9, 12
 - Yuba County, Calif. (1939-40), 261
- United States (1950), 169
- Urban population in United States (1930), 42
- Postwar planning
 - Concerning population and employment in California (1920-43), 197
 - Interbureau Committee on, (1940-43), 36, 162, 194
- See also* Military; World War II
- Potter, Albert F., 164
- Precipitation, *see* Climate
- Problem areas, agricultural
 - Delta County, Colo. (ca. 1940), 73
 - Eastern and Southern States (1934-37), 99
 - Pacific Northwest (1935-37), 238
 - South Central United States, (1937), 99
 - United States (1935), 100, 109-A
 - Western States (1934-37), 241
- See also* Land classification; Submarginal land
- Production credit associations
 - Appalachian States (1942), 162
 - United States (1937), 51
- Public aid, *see* Aid to farmers
- Public lands
 - Arizona, California, Nevada, New Mexico, and Washington (1934-35), 241
 - United States (ca. 1935-46), 158
- See also* Landownership types; Recreational lands
- Racial and ethnic characteristics of rural population in United States (1910), 8
- See also* Ethnic groups; Japanese-Americans; Negroes
- Railroads, *see* Transportation
- Ranches in United States (1930), 134
- Real estate, farm, in Western United States (1941-44), 237
- Recreational lands
 - California and Utah (1934), 241
 - Existing and proposed open spaces in Massachusetts (1929), 119
 - Federal and State in United States (1936), 109-C
 - Sites studied in Western United States, 234
- Reed, W. G., 7
- Regions, administrative
 - BAE (1938-41), 34, 188
 - Land utilization program, 188
 - Works Progress Administration, in Pacific Northwest (1935-37), 238
- Regions of the United States
 - Agricultural (1926-31), 120
 - Cash-crop and tenancy (1935), 81
 - Land resource (1953), 168
 - Land use (1950), 165, 167
 - Land use adjustment (1940), 102
 - Land use problem (1935), 101
 - Livelihood (1943), 163
 - Natural land use (1933), 154
 - Physiographic (1930), 109-M
 - Plant growth (1937), 109-D
 - Rural cultural (1940), 41
 - Soil (1921-37), 109-D, 147, 152, 180
 - Tenancy (1935-36), 81, 145
 - Types of farming (1926-49), 56, 109-M, 120, 134
- Reservoirs
 - Missouri (1940), 184
 - Oregon (1937-39), 274, 290
 - Quabbin Reservoir, Mass. (ca. 1939), 88
 - Upper Colorado River Basin (1938), 289
 - Utah (1939), 288
 - Western and Great Plains States, selected watersheds (ca. 1940), 182-183
- See also* Irrigation; Water facilities
- Resettlement
 - Potential areas in Arkansas (1935), 99
 - Projects in Pacific Northwest (1935-37), 238
- See also* Settlement
- Resettlement Administration, 188, 39, 41
 - Land-Use Planning Section, 20, 41
 - See also* Farm Security Administration
- Resource regions in Appalachian States (1942), 162
- Reuss, L. A., 91
- Rivers, water discharge in Western United States (ca. 1940), 178
- See also* Drainage basins; Water facilities
- Roads, *see* Transportation

- Roterus, Victor, 163
- Rural cost of living in United States by State (1938), 53
- Rural cultural regions of United States (1940), 41
- Rural Electrification Administration
 Activities in Appalachian States (1942), 162
 Loans in United States (1937), 50
- Rural institutions and country estates in United States (1930), 134
- Rural population, *see* Population
- Salt mines in Meigs County, Ohio (ca. 1940), 73
- School districts
 Arizona (ca. 1931), 216
 Josephine County, Oreg. (1936-37), 277
 Teton County, Mont. (1940), 73
- Schools, rural
 Benewah County, Idaho (1937-38), 266
 Hand County, S. Dak. (1940), 96
 Latah County, Utah (1936-37), 269
 Louisiana (1934), 99
 Snohomish County, Wash. (1936), 283
 Yuba County, Calif. (1939-40), 261
- Schools, vocational, in Appalachian States (1942), 162
- Scudder, H. D., 220
- Seasonal employment, *see* Migrant workers
- Seasonal use of grazing lands, *see* Grazing lands
- Selby, H. E., 278
- Settlement
 Arizona (1930-35), 241
 California (1930-35), 253
 Historical, in United States (1790-1890), 169
 Inquiries about, in Columbia Basin project, Wash. (1939-40), 207
 Lands suitable for
 Arizona, California, and Washington (1934-35), 241
 Arkansas (1935), 99
 Oregon (1944-46), 194
 Pacific Northwest (1935-37), 238
 United States (1935), 100
 Oregon (1930-36), 241
 See also Migration
- Settlements and towns
 Arizona (1931), 216
 Oregon (1904), 149
 South America (1920-21), 28
- Shantz, H. L., 152, 231
- Sheep
 Driveways in Arizona (1920-42), 149, 246
- Seasonal movement of in Intermountain States (1938-39), 57
 See also Grazing lands; Livestock; Livestock products
- Slaves, historical distribution of in United States, 18
- Smith, J. W., 290
- Smith, Ray, 78
- Social characteristics of rural population
 Appalachian States (1942), 162
 United States (1910), 8
- Soil Conservation Service, 39
- Soil erosion, *see* Erosion
- Soil-protecting crops in Mississippi River watershed (1934), 80
- Soil quality
 Hancock County, Ohio (ca. 1940), 73
 San Joaquin Valley, Calif. (ca. 1942), 199
 Selected watersheds in Western and Great Plains States (ca. 1940), 182-183
 Spokane County, Wash. (1939), 97
 Upper Pit River area, California (1941), 291
- Soil types
 Appalachian States (1942), 162
 Arkansas (1938), 109-D
 Benewah and Kootenai Counties, Idaho (1937-40), 242
 Boundary County, Idaho (1936-37), 269
 California (1931), 109-D
 Clark County, Wash. (1937-40), 242
 Delta County, Colo. (ca. 1940), 73
 Florida (1925), 109-D
 Josephine County, Oreg. (1937-40), 242
 Lewis County, W. Va. (ca. 1940), 73
 Maryland (1907), 119
 Missouri (1931), 91
 North Dakota (1909, 1941), 58, 119
 Oklahoma, 160
 Oneida County, Idaho (1937-38), 267
 Petroleum County, Mont., 109-J
 Pinal County, Ariz. (ca. 1940), 242, 248
 San Jacinto watershed, Texas (1941), 116
 Santa Cruz County, Calif. (1936-41), 259
 Scott and Swift Counties, Minn. (ca. 1940), 73
 Tripp County, S. Dak. (ca. 1940), 73
 United States (1921-37), 109-D, 147, 152, 180
 Western and Great Plains States, selected watersheds (ca. 1940), 182-183
 Wisconsin (1876, 1918), 119
 Yazoo area, Miss. (1940), 82
 Yuma County, Ariz. (1937-40), 242
- Spillman, W. J., 3, 10, 5, 16

Stine, O. C., 19, 24, 28, 6, 18

Submarginal land

Meigs County, Ohio (ca. 1940), 73

Pacific Northwest (1935-37), 238

Proposed Federal and State purchase units in Illinois (1934), 99

Proposed for Great Smoky National Park (ca. 1931), 103

Purchase of in United States under land utilization program, 188-189

South Central United States (1937), 99

United States (1933-35), 98, 100

See also Land classification; Problem areas

Surveys, historical types of in United States, 169

Tax delinquency

California (1932-33), 251

Fergus County, Mont. (ca. 1936), 104

Grays Harbor County, Wash. (1936), 284

Louisiana (1934), 99

Teton County, Mont. (1936), 73

Tax status of land

Burke and Sargent Counties, N. Dak. (1938), 95

Spokane County, Wash. (1939), 97

Taxes

Historical purposes of in Josephine County, Oreg. (1910-34), 277

Payments in lieu of on Farm Security Administration property (1942), 174

Taylor, H. C., 10, 14, 19, 6

Telephones on farms

Appalachian States (1942), 162

United States (1930), 135

Tenancy and sharecropping

Appalachian States (1942), 162

Argentina and Uruguay (1918-21), 25

Japanese-operated tenant farms in Pacific Coast region (1940), 235

Southeastern United States (1935-36), 81, 145

United States (1880-1935), 10, 81, 145, 230

Tenant purchase program, loans for in United States (1939), 50

Tennessee Valley Authority, activities in Appalachian States (1942), 162

Thompson, L. K., 18

Tobacco-growing districts in United States (1932), 62

Topography, *see* Geomorphology

Tractors

Alabama (1930), 90

Appalachian States (1942), 162

United States (1917-38), 11, 135

Trade areas

Hand County, S. Dak. (1940), 96

Proposed for Columbia Basin project, Washington (1939), 207

Rhea County and adjacent areas, Tennessee (1936), 108

Transportation

Bluegrass region, Kentucky (ca. 1932), 60

Oil and gas pipelines in Arkansas (1930), 160

Problem areas resulting from isolated communities in Utah (1937), 241

Railroad districts in Georgia (1937), 110

Railroad land grants in Arizona, California, Montana, and Oregon (1904-27), 149, 151

Railroad systems and rate zones in United States (1920), 149

Roads in Louisiana (1932-34), 99

Roads serving farms in Appalachian States (1942), 162

Roads serving farms in United States by type (1930), 136

Truck farms in United States by types of crops (1898), 2

Turnure, Robert, 180, 2

Type-of-farming maps, *see* Farms, types

Unemployment

California (1920-43), 197

On farms in United States (1937), 78

University of California, lands owned by (1934), 241

Urban population in United States (1930), 42

Urban-rural fringe in Portland, Oreg. (1941), 117

Value of farmlands, *see* Lands, value

Van Cleef, E., 26

Veatch, J. O., 109-J

Vegetation

Arizona (1935), 151, 241

California (1934), 109-C, 241

Natural cover in Florida, Illinois, Indiana, Louisiana, Minnesota, and Wisconsin, 150

Natural forest and grassland climax areas in Eastern United States, 38

Nevada (ca. 1922), 114

New Mexico, 151

Original vegetation of Michigan, 156

Plant growth regions of United States (1937), 109-D

Uinta Basin, Utah, 279

United States (1923-24), 152, 231

Wisconsin (1876), 119

See also Geomorphology (Natural land cover)

- Wage ceilings for grape pickers in California (1943), 214
- Wall, _____, 50.
- War Department, land purchases in United States (1944), 79
- Wartime activities, *see* Military; Postwar planning; World War II
- Water compacts, interstate, in Western United States (1943), 180
- Water facilities
- Oregon (1937-38), 274
 - United States (1939-40), 175, 286
 - Watersheds in Western and Great Plains States (ca. 1940), 182-183, 291
 - See also* Ground water; Irrigation; Water supply; Wells
- Water planning operations in South Central United States (1939), 176
- Water recovery in Santa Clara Valley, Calif. (1935-36), 119
- Water supply
- Artesian areas in Eastern Texas (1942), 185
 - Texas (1935), 99
 - Utah (1943-44), 287
 - Western United States (ca. 1940), 179-185
 - See also* Ground water; Irrigation; Water facilities; Wells
- Waugh, F. V., 16
- Weather, *see* Climate
- Webster, Philip J., 92, 241
- Welfare, *see* Aid to farmers
- Wells
- Arizona (1931), 216
 - Llano Estacado (High Plains) area, Texas (ca. 1948), 169
 - Los Angeles area, California, 263
 - Western United States, grazing lands developed by (1905), 164
- Wetlands, *see* Drainage
- Wheat, *see* Crops
- Windmills, grazing lands developed by in Western United States (1905), 164
- Woofter, T. J., 41
- Wool, *see* Livestock products
- Wooten, E. O., 85, 93
- Wooten, Hugh H., 27
- Works Progress Administration, regions in Pacific Northwest (1935-37), 238
- World War II
- Population changes during
 - North Central United States, 43
 - Pacific Northwest, 194
 - United States, 36
 - Value of farms during World Wars I and II in Western United States and California, 237
 - War purchase sites in United States (1944), 79
 - See also* Military; Postwar planning
- Zon, Raphael, 152, 231
- Zoning, rural, in Wisconsin (1940), 115

Geographic Index

This index is arranged hierarchically, beginning with the world and proceeding to continents, regions, and nations. Within the United States—the bulk of the entries—the arrangement continues hierarchically from the country as a whole through regions, States, regions within States, and individual counties. References are to numbered entries.

World

- Agricultural regions (1925), 153
- Agriculture, U.S. Department of, activities (ca. 1925), 63
- Boundaries, internal political (1920-40), 35
- Crops
 - Average cotton production (1934), 67
 - International trade in wheat (1910-14), 30
- Geography of the World's Agriculture* (1917), 24
- Livestock
 - Distribution of horses, mules, and asses (1923), 64
- Population density (1925), 153

Africa

- North Africa
 - Boundaries, internal political (1939), 35
 - Crops and livestock in Algeria and Egypt (1917), 24
- Union of South Africa
 - Boundaries, provincial (ca. 1900-20), 35
 - Crops and livestock (1917), 24

Asia

- Middle East
 - Boundaries, provincial (1939), 35
- Ceylon
 - Crops and livestock (1917), 24
- India
 - Boundaries, provincial (1917), 35
 - Crops and livestock (1917), 24
 - Historical livestock chart (1840-1923), 64
- Japan
 - Crops (1917), 24
- Java
 - Crops (1917), 24
- Palestine
 - Political districts (1936), 35
 - Topography (1936), 35
- Philippines
 - Crops and livestock (1917), 24

Australia and New Zealand

- Boundaries, provincial (ca. 1900-1923), 35
- Crops and livestock (1917), 24

Canada

- Crops and livestock (1917), 24

Europe

- Europe
 - Boundaries, provincial (1915-39), 35
 - Crops and livestock (1917), 24
- Austria-Hungary
 - Forest areas (ca. 1919), 29
 - Livestock (ca. 1919), 29
- Balkan nations
 - Arable lands (ca. 1919), 29
 - Boundaries, provincial (1924), 35
 - Crops and livestock (ca. 1919), 29
- Germany
 - Historical livestock chart (1840-1923), 64
- Greece
 - Arable lands (ca. 1919), 29
 - Crops and livestock (ca. 1919), 29
- Russia
 - Agricultural regions (1927), 66
 - Historical livestock chart (1840-1923), 64
- Turkey (western)
 - Arable lands (ca. 1919), 29
 - Crops and livestock (ca. 1919), 29

Latin America

- Latin America
 - Boundaries, provincial (1940), 35
- South America
 - Crops and livestock (1920-21), 27-28
 - Political subdivisions (1900-10), 28
 - Rainfall (1918), 26
 - Settlements and towns (1900-1910), 28

Argentina

- Crops and livestock (1917-21), 24-25
- Historical livestock chart (1840-1923), 64
- Farm tenancy (1918-21), 25
- Farms, types (1918-21), 25

Chile

- Crops and livestock (1917-21), 24-25, 65
- Farms, types (1918-21), 25

Cuba

- Crops (1917), 24

Mexico

- Crops (1917), 24

Puerto Rico

- Crops (1917), 24

Uruguay

- Crops and livestock (1917-21), 24-25
- Farm tenancy (1918-21), 25
- Farms, types (1918-21), 25

Venezuela

- Crops (1918), 27

United States

- Abandoned farms (1935), 142
- Agricultural regions (1926-31), 120
 - See also* Farms, types
- Aid to farmers, Federal (1930-40), 44, 50, 143, 208
- Automobiles on farms (1920-30), 135
- Boundaries, internal political (1900-1940), 35
- Climate, 7, 37, 139, 168
- Corn, *see* Crops
- Cost of living, rural, by State (1938), 53
- Country estates and rural institutions (1930), 134
- County land use planning, progress maps (1939-41), 70
- Credit, *see* Production credit associations
- Crop failure (1934), 141
- Crop reporting districts, 52
- Croplands, distribution (1945), 165
 - Changes in cropland harvested (1909-29), 131
 - In use or lying fallow (1926-34), 120, 140
 - Land favorable for crops (1953), 168
 - Percentages of land used for (ca. 1959), 169
 - Population/cropland ratio, changes in (1880-1960), 169, 229
- Crops and livestock, distribution (1839-1919), 19, 21, 24; (1919-35), 121
 - Forage crops and grasses (ca. 1905), 3
 - Fruits and vegetables (1936), 54
 - Hay investigations (ca. 1908), 4
 - Tobacco-growing districts (1932), 62
 - Wheat, acreages by type (1919), 23; planting dates (1925), 68
 - See also* Livestock products; Marketing

Cultural regions, rural, 41

Drainage

- Basins (1927), 109-D
- Farmlands with artificial drainage, 137
- Patterns, rivers (1915), 6; 172
- Wetlands and drainage, 170

Dry farming areas (1957), 172

Electricity on farms (1930), 135

Employment

- Agricultural and manufacturing (1930), 124
- Farm labor, distribution by type (1930), 144
- Seasonal labor, peak periods, 77
- Unemployment on farms (1937), 78
- See also* Migrant workers

Erosion survey (1935), 109-D

Ethnic characteristics of rural population (1910), 8

Farm acreage, changes in (1920-35), 130

Farm finance, *see* Farm income and expenditures; production credit associations

Farm income and expenditures

- Income by county (1930), 75
- Sales, expenditures, and mortgage debts (1920-30), 146

Farm labor, *see* Employment; Migrant workers

Farm machinery, expenditures (1929), 146

See also Tractors

Farm products sold (1919-35), 121, 146

See also Livestock products; MarketingFarm relief, *see* Aid to farmers

Farms, distribution (1860-1920), 14, 15

By size (1930-35), 127, 129

Changes in distribution (1910-35), 128

Farms, types (1930-49), 56, 109-M, 134

Dry farming areas (1957), 172

Truck farms (1898), 2

Field offices and employees of the BAE (1924), 33

Finance, *see* Credit associations; Farm income and expenditures

Flood control surveys (1936-39), 175, 187

Foreign-born population (1910), distribution in rural areas by place of origin (1910), 8

Forests

Distribution and types (1950), 165

Types (1926-31), 120

Forest products (1929), 123

Forest-product farms (1930), 134

Geography of the World's Agriculture (1917), 24

Geomorphology

Natural land use areas (1933), 154, 109-M

Physiographic regions (1921), 148; (1930), 109-M

Topographic relief (1915), 6; 169

Glaciation, 169

- Government expenditures, *see* Aid to farmers
- Grass and forage crops (ca. 1905), 3
- Grazing lands (1926-31), 120; (1950-53), 165, 168
 Carrying capacity (1926-31), 120
 On farms (1935), 132-133
 Ungrazed areas in national forests and adjacent areas (1946), 158
- Income, per capita (1929-34), 196
 See also Farm income and expenditures
- Indian reservations (1939-46), 158
- Irrigated land (1950-53), 165, 168
 Changes in acreage (1919-29), 138
- Land
 Favorable for crops (1953), 168
 Improved (1850-1910), 17
 In farms (1850-1910), 16
 Value, by minor civil division (1930), 76
- Landownership and tenure (1910-35), 145
 See also Tenancy
- Land relief, *see* Geomorphology
- Land resource areas (1953), 168
- Land use (1950), 165, 167
 Adjustment areas (1940), 102
 Natural land use areas (1933), 154, 109-M
 On farms (1929-35), 132
 Problem regions (1935), 101
 Recommended changes in (1935), 100
- Land use planning, county program, progress maps (1939-41), 70
- Land utilization program (1938), 188-189
- Landforms, *see* Geomorphology
- Livelihood areas (1943), 163
- Livestock, distribution (1839-1919), 19, 24; (1919-35), 121
 Historical livestock chart (1840-1923), 64
 Stock ranches (1930), 134
- Livestock products (1929), 122
 Dairy products (1839-1919), 20
 Wool (1900-1909), 22
- Loans to farmers, *see* Aid to farmers; Production credit associations
- Machinery on farms (1930), 135
 See also Tractors
- Manufacturing
 Employment (1930), 134
 Rural industry (1940), 41
- Marketing of farm products (1934-39), 55
- Migration
 Historical interstate (1870-1930), 46
 To Pacific Coast region (1930-39), 210
- Minor civil divisions (1920-40), 35
- Nursery products (1929), 123
- Population
 Changes in distribution during World War II, 36
 Density (1790-1920), 13
 Distribution (1950), 169
 Farm (1880; 1920-35), 9, 125-126
 Negro and white farm population (1910), 8; (1935), 126
 Population/cropland ratio, changes in (1880-1960), 169, 229
 Rural, distribution and social characteristics (1790-1920), 8, 12
 Urban (1930), 42
- Problem areas, agricultural (1935), 100, 109-A
- Production credit associations (1937), 51
- Public lands (1939-46), 158
 See also Landownership; Recreational areas
- Ranches, livestock (1930), 134
- Railroad systems and rate zones (1920), 149
- Recreational areas, Federal and State (1936), 109-C
 See also Public lands
- Regions, administrative, of the BAE (1938-41), 34, 188
- Roads serving farms, by type (1930), 136
- Rural cultural regions (1940), 41
- Rural industry, 41
- Rural institutions and country estates (1930), 134
- Settlement
 Historical (1790-1890), 169
 Lands suitable for (1935), 100
- Slaves, historical distribution (1750-1840), 18
- Social characteristics of rural population (1910), 8
- Soil erosion, *see* Erosion
- Soil regions (1921), 147; (1931), 152; (1937), 109-D; (1938), 180
- Stock ranches (1930), 134
- Submarginal cropland (1933), 98
- Surveys, historical types, 169
- Taxes, payments in lieu of on FSA property (1942), 174
- Telephones on farms (1930), 135
- Tenancy and sharecropping (1880-1935), 10, 81, 145, 230
- Tobacco-growing districts (1932), 62
- Topography, *see* Geomorphology
- Tractors on farms (1917), 11; (1935), 135
- Transportation
 Railroad systems and rate zones (1920), 149
 Roads serving farms, types of (1930), 136
- Truck farming, *see* Farms, types
- Type-of-farming areas, *see* Farms, types

Value of land and buildings, *see* Land, value

Vegetation (1924), 152

Native (ca. 1923), 231

Plant growth regions (1937), 109-D

Wheat, *see* Crops

World War II

Population changes during, 36

War purchase sites (1944), 79

Water facilities program (1939), 175

Welfare, *see* Aid to farmers

Eastern United States

Eastern United States

Agricultural use or originally forested counties (1929-34), 130

Forest and grassland climax areas, 38

Appalachian States (Kentucky, North Carolina, Tennessee, Virginia, and West Virginia)

Atlas of Agricultural Information—Appalachian Region (1942), 162

Northeastern United States

Township boundaries (1920), 35

Forest regions in New England (1942), 118

Southeastern United States

Crops grown (1930-35), 81

Corn and forage crops (ca. 1905), 3

Farms, types (1941), 112

Land and buildings, value (1930), 81

Land use adjustment areas (1941), 112

Negro and white farmers (1930-35), 81

Population, areas increasing in (1930-35), 81

Projects of the U.S. Department of Agriculture (1938), 190

Tenancy and sharecropping (1935-36), 81, 145

Central United States

Soil-protecting crops in the Mississippi River watershed (1934), 80

North Central United States

North Central States

Population changes (1930-40), 43

Great Plains

Automobiles, survey of expenditures on (ca. 1940), 45

Crop yields (1926-48), 169

Farm economy survey (ca. 1940), 45

Land classification (1930), 84, 109-J, 186

Medical care, survey of expenditures on (ca. 1940), 45

South Central United States

Farms, types (1941), 112

Geomorphology (ca. 1941), 160

Land use (ca. 1941), 160

Land use adjustment areas (1941), 112

Problem areas (1937), 99

Submarginal land (1937), 99

Water planning operations (1939), 176

Western United States

Aid to farmers, *see* Government expenditures

Climate

Average warm season precipitation, 180

Drainage basins, major (1940), 177-178

Employment, *see* Occupations

Farms, value of during World Wars I and II, 237

Flood control program, progress of (1939-41), 292

Government expenditures (1940), 44, 208

Grazing lands

Developed by wells and windmills (1905), 164

Seasonal use (1905; 1947), 164

Irrigated lands, based on surface and ground water, 179

Irrigation

Irrigated lands (1915), 5

Surface and ground water, 179

Intensity by counties (1930), 236

Requirements (1943), 180

In Upper Colorado River Basin (1938), 289

Irrigation Agriculture in the West (1948), 165

Japanese-Americans in Pacific Coast region (1940), 235

Land, feed-producing capacity (ca. 1940), 196

Land Economics, Division of, projects (ca. 1940), 233

Land use acreages (1900-1960), 196

Land use adjustment areas (1940), 232

Livestock

Cattle distribution (ca. 1905), 3

Sheep, seasonal movement of (1938-39), 57

Migrant workers (1935-42), 211

Migration to Pacific Coast region (1930-39), 210

Military zones, restricted (1941-43), 194

Minor civil divisions (1940), 35

Occupations of heads of families (1930), 212
 Population growth
 Pacific Coast region (1930-39), 210
 Western States (1900-1960), 196
 Real estate, farm (1941-44), 237
 Recreational sites studied, 234
 Rivers, water discharge (ca. 1940), 178
 Water compacts, interstate (1943), 180
 Water supply (ca. 1940), 179-183
 Wells and windmills, grazing lands developed by
 (1905), 164

Northwestern United States

Abandoned farmlands (1935-37), 238
 Automobiles, survey of expenditures on (ca. 1940),
 45, 213
 Croplands (1941), 193
 Farm income and expenditures, survey of (ca. 1940),
 45, 213
 Farms, types of (1935-37), 238
 Housing, survey of expenditures on (ca. 1940), 45,
 213
 Irrigated lands (1941), 193
 Irrigation projects (1941-43), 194
 Land classification, progress chart for, 239
 Land development areas (1941), 193
 Medical care, survey of expenditures on (ca. 1941),
 45, 213
 Migration to (1930-39), 210
 Military reservations (1941-43), 194
 Population changes (1940-43), 194
 Problem areas, agricultural (1935-37), 238
 Resettlement projects (1935), 238
 Settlement, potential areas (1935-37), 238
 Submarginal land (1935-37), 238

Southwestern United States

Flood control program, progress map (1940), 286
 Irrigated lands, 240
 Land use, 240
 Minor civil divisions (1940), 35
 Water facilities program, river basins involved in
 (1940), 286

Alabama

Croplands (1929-35), 90
 Erosion survey (1934), 109-D
 Farm labor (1929-30), 90

Farm products (1929-30), 90
 Forests, types (1934), 109-C
 Geology (1904), 119
 Land classification (ca. 1935), 109-J
 Landownership types (1937), 89
 Land use (1947-50), 166
 Tractors (1929-30), 90

Regions

Northern Alabama

Forested lands (ca. 1940), 118

Counties

Coffee

Land classification (1935), 109-J

Lee

Land classification (ca. 1940), 72

Alaska

General Land Office base map (1935), 109-H

Arizona

Climate (1936-38), 246
 Erosion on rangelands (1935), 241
 Grazing lands, 246
 Indian lands, irrigation projects for (1944), 244
 Irrigation
 Irrigated lands (ca. 1942), 243
 Irrigated lands, unproductive or overpopulated
 (1935), 241
 Potential (1944), 244
 Landownership types, 109-E
 Land use, 151
 Migrant workers (1940), 211
 Migration to (1930-39), 210; to and from
 (1870-1930), 46
 Minor civil divisions (1940), 35
 Problem areas, agricultural (1934-35), 241
 Public lands (1935), 241
 Railroad land grants (ca. 1920-27), 149, 151
 School districts, by county (ca. 1931), 216
 Settlement (1930-35), 241
 Areas available for (1935), 241
 Vegetation (1935), 241; 151

Regions

Northern Arizona

- Forest lands (ca. 1920-27), 149
- Indian lands (ca. 1920-27), 149
- Sheep driveways (ca. 1920-27), 149
- Proposed Glen Canyon Reservoir, Upper Colorado River Basin (1938), 289

Southern Arizona

- Irrigation projects (1935, 1943), 245

Western Arizona

- Parker Dam, photograph of (1940), 293
- Vegetation and landownership types in Williams River watershed, (1940), 293

Counties

Apache

- Dwellings, mines, roads, school districts, springs, wells, water tanks (1931), 216
- Lyman Dam project: crops, dwelling, and landownership types (1936-39), 247
- Vernon area: climate, landownership types, and land use (1940), 183

Cochise

- Landownership types (1941), 249
- Dwellings, mines, roads, school districts, springs, wells, water tanks (1931), 216
- Sulphur Springs Valley: climate, land use, water facilities, soil quality (ca. 1940), 183
- Upper San Pedro watershed: landownership types, land use (1938-40), 183, 291
- Whitewater Draw watershed: climate, land use, hydrology, soil quality (ca. 1940), 183, 291

Coconino

- Dwellings, mines, roads, school districts, springs, wells, water tanks (1931), 216

Gila

- Dwellings, mines, roads, school districts, springs, wells, water tanks (1931), 216

Greenlee

- Dwellings, mines, roads, school districts, springs, wells, water tanks (1931), 216

Graham

- Dwellings, mines, roads, school districts, springs, wells, water tanks (1931), 216
- Sulphur Springs Valley: climate, land use, water facilities, soil quality (ca. 1940), 183

Mohave

- Dwellings, mines, roads, school districts, springs, wells, water tanks (1931), 216

- Upper Virgin River watershed: water facilities, climate, land use, hydrograph (ca. 1940), 183

- Williams River watershed: flood control, vegetation, landownership types (1940), 293

Navajo

- Dwellings, mines, roads, school districts, springs, wells, water tanks (1931), 216

- Woodruff area: water facilities (ca. 1940), 183

Pima

- Dwellings, mines, roads, school districts, springs, wells, water tanks (1931), 216

Pinal

- Dwellings, mines, roads, school districts, springs, wells, water tanks (1931), 216
- Landownership types (1939-40), 248
- Soils (1937-40), 242, 248
- Tax levies (1939-40), 248
- Vegetation (1937-40), 242
- Casa Grande Valley: irrigation (1939-40), 248
- San Carlos irrigation project (1939-40), 248

Santa Cruz

- Dwellings, mines, roads, school districts, springs, wells, water tanks (1931), 216
- Upper San Pedro watershed: water facilities, landownership types, land use (ca. 1940), 183, 291

Yavapai

- Dwellings, mines, roads, school districts, springs, wells, water tanks (1931), 216
- Landholders, physical features (1920), 291
- Camp Verde area: water facilities, landholders (ca. 1940), 183
- Kirkland Creek watershed: landownership types, land use, water facilities (ca. 1940), 182-183
- Verde River Valley: water facilities (1937), 291

Yuma

- Crops grown (1937), 73
- Dwellings, mines, roads, school districts, springs, wells, water tanks (1931), 216
- Land classification (ca. 1940), 72
- Soils and vegetation (1937-40), 242
- Mohawk Water Conservation District: soils, crops (ca. 1937), 250
- Yuma Mesa: irrigation facilities (1941), 224

Arkansas

- Cotton gins (ca. 1935), 59
- Cotton production (1879-1939), 86
- Crop yields (1935), 59, 109-1
- Erosion survey (1934), 160

Farmland, improved (1935), 99
 Farming regions, types (1941), 161
 Geology (1929), 119; (1941), 161
 Land use (1947-50), 166
 Mineral industries (1930), 160
 Physiographic regions (1941), 161
 Pipelines, oil and gas (1930), 160
 Problem areas, agricultural (1935-38), 99
 Resettlement, potential areas (1935), 99
 Soils (1938), 109-D

Regions

Southeastern Arkansas
 Drainage (1941), 170

Counties

Arkansas
 Land classification (ca. 1940), 72
 Drew
 Land classification (ca. 1940), 72
 Howard
 Land classification (ca. 1940), 72
 Pope
 Land classification (ca. 1940), 72
 Randolph
 Land classification (ca. 1940), 72
 Yell
 Land classification (ca. 1940), 72

California

Age composition of population (1930-60), 209
 Age distribution (1940), 196
 Climate (1935), 241
 Counties, historical development, 252
 County funds, disbursement (1929-39), 198
 Crop yields (1934), 241
 Crops and livestock
 Distribution (1930-39), 218, 241, 255
 Farm income by types of (1910-43), 196
 Employment, types (1920-43), 197
 See also Wage
 Erosion (1934-36), 241
 Farm forestry program, 221
 Farm income, by types of crops (1910-43), 196
 Farm population (1935), 92
 See also Population

Farm products, annual value (1930-39), 196
 Farms
 Sizes (1930), 241
 Types (1930-39), 218, 241, 255
 Value of during World Wars I and II, 237
 Flood control investigations (1941), 292
 Forest products (1939), 218
 Geology (1938), 119
 Geomorphology (1935), 119, 241
 Grazing lands, seasonal use (1935), 241
 Income, State (1919-38), 195
 Indian reservations (ca. 1935), 254
 Industrial employment levels (1920-43), 197
 Irrigation
 Irrigated lands (ca. 1940), 196; 93
 Proposed (1942), 201
 Japanese-Americans in (1940), 235
 Land
 Feed-producing capacity (ca. 1944), 196
 Value (1930), 241; (1940), 256
 Landownership types (1934-35), 241
 Land use (1934), 109-C, 241
 Land use acreages (1900-1960), 196
 Livestock (1930), 255
 Lumber mills (ca. 1937), 257
 Migration
 To and from (1870-1930), 46
 To (1930-39), 210
 Military installations (1941), 194
 Minor civil divisions (1940), 35
 Population
 As percentage of U.S. population (1919-38), 195
 Density (1930), 241; (1870-1943), 253
 Distribution (1930-40), 253
 Distribution of farm and nonfarm (1935), 92
 Growth (1900-1960), 196, 197
 Postwar planning in population and employment
 (1920-43), 197
 Problem areas, agricultural (1934-36), 241
 Public lands (1934-35), 241
 Recreational lands (1934-35), 241
 Reservoirs (1934), 241
 Seasonal range use (1935), 241
 Settlement (1930-35), 241, 253
 Lands suitable for (1934-36), 241
 Tax delinquency (1932-33), 251
 Topography, *see* Geomorphology
 Unemployment (1920-43), 197
 Vegetation (1928-34), 109-C, 241
 Wage ceilings for grape pickers (1943), 214

Regions

Central California

Central Valley: irrigation, farm and nonfarm population (1936-46), 199, 241

Sacramento Valley

Crops grown, by operating units (1944), 200

Farming areas, types (1930), 199, 221

Irrigation, plant cover, and landownership types (1942), 293

San Joaquin Valley

Farms, types (1930), 221; (ca. 1941), 199

Irrigation, proposed (1942), 199

Ground water (ca. 1940), 183

Land classification (ca. 1940), 183

Migrant labor camps, use of (1940), 211

Soil

Types (1931), 109-D

Quality (ca. 1941), 199

Northern California

North central coast

Farming regions, types (1930), 221

Soils (1931), 109-D

San Francisco area

Base map of counties, 203

Southern California

Railroad land grants (1923-27), 149

Soils (1931), 109-D

Topography, 202

Imperial Valley

Land tenure (1936-39), 258

Migrant labor camps, use of (1940), 211

Los Angeles area

Base map of counties, 203

Citrus, quality of (1940), 199

Erosion in Santa Monica Mountains (ca. 1940), 199

Flood plain zoning (1941), 294

Ground water and wells, 263

Vegetation in selected quadrangles (ca. 1930), 109-C

Eastern California

Carson River watershed: flood plain, landownership types, and plant cover (1942), 293

Truckee River watershed: landownership types (1942), 293

Counties

Butte

Land classification (ca. 1940), 72

Nonagricultural lands (1942), 293

Colusa

Land classification (ca. 1940), 72

Del Norte

Del Norte area: water facilities, climate, landownership types, and land use (ca. 1940), 183

Fresno

Climate and cotton production (ca. 1942), 215

Migrant labor camps, use of (1940), 211

Miller & Lux Corp. lands (ca. 1936), 264

Imperial, *see* Southern California region

Kern

Land classification (ca. 1940), 72

Study of Arvin (1940), 199

Population distribution in Bakersfield (1940), 262

Lassen

Land classification (ca. 1940), 72

Sierra Valley: climate, topography, landholders, and irrigation (ca. 1940), 183, 291

Upper Pit River watershed: water facilities, landownership types, soil quality (1941), 182, 291

Los Angeles, *see* Southern California region

Mendocino

Russian River watershed: base map, 293

Merced

Miller & Lux Corp. lands (ca. 1936), 264

Turlock Irrigation District, 265

Modoc

Alturas area: soils (1931), 109-D

Upper Pit River watershed: water facilities, landownership types, soil quality (1941), 182, 291

Mono

Walker River watershed: water facilities, landownership types, land use (ca. 1940), 183

Plumas

Sierra Valley: climate, topography, landholders, and irrigation (ca. 1940), 183, 291

Riverside

Land classification (ca. 1940), 72

San Benito

Operating units, 204

San Bernadino

Hinckley Valley: soil quality, ground water (ca. 1940), 183

San Diego

Watersheds, flood areas, and Serrania project (1939), 293

Fallbrook area: crops, landholders (1938), 182, 291

San Joaquin

Land classification (ca. 1940), 72

Santa Barbara

Areas using seasonal labor, by type of crop (ca. 1941), 211

Santa Clara

Santa Clara Valley: water recovery in (1935-36), 119

Santa Cruz

Crops grown, historical precipitation, irrigation, land use, mortgaged farms, and soils (1936-40), 259

Sierra

Sierra Valley: climate, topography, landholders, and irrigation (ca. 1940), 183, 291

Siskiyou

Upper Pit River watershed: water facilities, land-ownership types, soil quantity (1941), 182, 291

Sonoma

Land classification (ca. 1940), 72
Russian River watershed: base map, 293

Stanislaus

Turlock Irrigation District, 265

Sutter

FSA farms, 225

Tulare

Irrigated land (1944), 260
Dinuba, study of (1940), 199
Kaweah-Tule River area: base map (ca. 1940), 291

Yuba

Cultural features (1939-40), 261
Land classification (ca. 1940), 72
Landownership types (1939-40), 261
Land use (1939-40), 261
Migration to (1930-39), 210
Population, rural (1939-40), 261

Colorado

Corn yields, historical, 121

Geology (1913), 119

Land classification (1930), 84, 109-J, 186

Topography (1913), 119

Regions

Northwestern Colorado

Topography, 172

Northeastern Colorado

Republican River Basin: agricultural conditions, population loss, geology, water facilities (1930-39), 182, 183

Southern Colorado

San Luis Valley: irrigation (1929), 119

Mosca Irrigation District: land use capabilities, climate (ca. 1940), 182

Western Colorado

Upper Colorado River Basin: damsites, reservoirs, irrigation, arable lands (1938), 289

Counties

Baca

Cimarron River area: water facilities (1938), 182, 183

Delta

Land use, problem areas, and soil fertility (ca. 1940), 73

North Fork of Gunnison River area: water facilities, types of farms (ca. 1940), 183

Dolores

Dove Creek area: land classification and ownership types, 85

Eagle

Gypsum Creek area: water facilities, climate, hydrology (ca. 1940), 183

La Plata

Irrigation ditch (ca. 1940), 183

Las Animas

Purgatoire River area: water facilities (1942), 182

Mesa

Little Dolores River Basin: climate, water facilities (ca. 1940), 183

Moffat

Yampa River watershed: water facilities, land use (ca. 1940), 183

Montezuma

Dove Creek area: land classification and ownership types, 85

Routt

Yampa River watershed: water facilities, land use (ca. 1940), 183

Washington

Landownership and land use (1934), 85

Connecticut

Erosion survey (1934), 109-D

Land use (1947-50), 166

Migration to (1870-1930), 46

Delaware

Erosion survey (1934), 109-D

Land use (1947-50), 166

Migration from (1870-1930), 46

Counties

Kent

Hartly area: land use, unoccupied farms, utilities,
39

District of Columbia

Migration to and from (1870-1930), 46

Florida

Erosion survey (1934), 109-D
Forests, types (1934), 109-C
Land classification (ca. 1936), 109-J
Land use (1947-50), 166
Migration to (1870-1930), 46
Minor civil divisions (1934-40), 35
Natural land cover, 150
Soils (1925), 109-D

Regions

South-central Florida

Land classification, cultural features, water depths
in Lake Okeechobee (ca. 1936), 74

Counties

See 11 county land classification maps (ca. 1940)
listed in entry 72

Lake

Land classification (1937), 109-J

Georgia

Erosion survey (1934), 109-J
Forests, types (1934), 109-C
Geology (1939), 119
Historical county boundaries and State capitals, 192
Land classification (1936-37), 110
Migration to and from (1870-1930), 46
Problem areas, agricultural (1935-37), 99
Railroad districts (1937), 110

Regions

Eastern Georgia

Topography of Savannah River watershed (1939),
191

Counties

See 29 county land classification maps (ca. 1940)
listed in entry 72

Idaho

General Land Office base map (1932), 109-H
Irrigated lands, 219
Migration to and from (1870-1930), 46
Township boundaries (1933), 35

Regions

Northern Idaho

Coeur d'Alene River Valley: soils, land use, drain-
age (1940), 293

Southern Idaho

Seasonal movement of sheep (1938-39), 57

Counties

Adams

Wiser River watershed: flood control, land use,
soils, vegetation, (ca. 1940), 293

Bannock

Cohn Ranch, 269

Benewah

Dwellings, land use, landownership types
(1937-38), 266

Land classification (ca. 1940), 72

Soils, vegetation (1937-40), 242

Bingham

Study of Shelley (ca. 1943), 217

Boundary

Soils (1936-37), 269

Butte

Little Lost River Basin: water facilities (ca. 1940),
183

Cassia

Raft River Basin: water facilities (ca. 1940), 183

Clark

Landownership types (1936-37), 269

Custer

Challis-East project: irrigation (ca. 1940), 183

Little Lost River Basin: water facilities (ca. 1940),
183

Franklin

Land classification (ca. 1940), 72

Kootenai

Land classification (ca. 1940), 72

Land use (1939), 268

Soils and vegetation (1937-40), 242

- Latah
 Schools (1936-37), 269
- Oneida
 Land classification (ca. 1940), 72
 Malad Valley
 Land use (1937-38), 267
 Water facilities, climate (ca. 1940), 183
- Owyhee
 Opaline Irrigation District: water facilities, land use (ca. 1940), 183
- Power
 Land classification (ca. 1940), 72
- Teton
 Darby Creek area: water use (ca. 1940), 183
 Teton drainage basin: soils, climate, land use, water rights, water facilities (ca. 1940), 183
- Washington
 Weiser River watershed: flood control, land use, soils, vegetation (ca. 1940), 293
- Illinois**
- Drainage and reclamation (1928), 109-D
 Erosion survey (1934), 109-D
 Land use (1947-50), 166
 Migration to and from (1870-1930), 46
 Mineral industries (1930), 109-D
 Natural land cover, 150
 Population, changes (1930-40), 43
 Submarginal land purchase units, proposed (1934), 99
 Township boundaries (1935-40), 35
- Counties
- Cook
 Copy of original township plat of the area (1836), 169
- Indiana**
- Land use (1947-50), 166
 Township boundaries (1920), 35
- Regions
- Northwest Indiana
 Natural land cover, 150
- Counties
- See* list of 73 county land classification maps (ca. 1940) in entry 72
- Iowa**
- Erosion survey (1934), 109-D
 Land use (1947-50), 166
 Township boundaries (1933), 35
- Kansas**
- Corn and wheat yields, historical, 121
 Geology (1937), 119
 Income and expenditures, farm survey on (ca. 1940), 45
 Land use (1947-50), 166
 Migration from (1870-1930), 46
 Population changes by county (1890-1900, 1930-40), 43
- Regions
- Western Kansas
 Land classification (1930), 84, 109-J, 186
 Arkansas Valley: water facilities, climate, recommended land use (ca. 1940), 183
- Northwestern Kansas
 Republican River Basin: agricultural conditions, population loss, geology, water facilities (1930-39), 182, 183
- Southwestern Kansas
 North Fork of Cimarron River watershed: climate, land classification, water facilities (ca. 1940), 182
- Counties
- Meade
 Crooked Creek watershed: water facilities, soils (ca. 1940), 183
- Seward
 Land classification, landownership, land use. Government loans, types of farming and value of land (1939), 106
- Kentucky**
- See also* Eastern United States, Appalachian States
 Erosion survey (1934), 109-D
 Geology (1907 and 1927), 119
 Land use (1947-50), 166
 Migration to (1870-1930), 46
 Physiographic regions (ca. 1932), 60

Regions

Central Kentucky

Transportation routes in the Bluegrass region (ca. 1932), 60

Counties

Laurel

Roads, 172

Leslie

Houses, 172

Louisiana

Crop yields (1934), 109-J

Erosion survey (1934), 109-D

Farms, types, based on crops grown (1937), 157

Land in State ownership because of nonpayment of taxes (1934), 99

Migration from (1870-1930), 46

Natural land cover, 150

Counties

See list of 12 parish land classification maps (ca. 1940) in entry 72 and 60 parish maps showing highways and schools (1932-34) in entry 99

Maine

Crops grown (1940), 85

Erosion survey (1934), 109-D

Forests, types (1940), 85

Land classification (ca. 1940), 72

Land use (1947-50), 166

Counties

See list of 16 county land classification maps (ca. 1940) in entry 72

Maryland

Erosion survey (1934), 109-D

Forests, extent (1927), 109-C

Geology (1907), 119

Land use (1947-50), 166

Soils (1907), 119

Regions

Western Maryland

Topographic relief, 172

Counties

Frederick

Land classification (ca. 1940), 72

Kent

Land classification (ca. 1940), 72

Planning boundaries (ca. 1940), 73

Washington

Planning boundaries (ca. 1940), 73

Massachusetts

Erosion survey (1934), 109-D

Land use (1947-50), 166

Open spaces, existing and proposed (1929), 119

Quabbin Reservoir, site of (ca. 1939), 88

Counties

Berkshire

Land use and land classification in Williamstown (ca. 1940), 71-72

Essex

Frost dates and land classification (ca. 1940), 72-73

Michigan

Drainage basin boundaries (ca. 1935), 119

Erosion survey (1934), 109-D

Geomorphology (1906 and 1911), 119

Land ownership types (1934), 87

Land use (1947-50), 166

Poor land areas (1934), 99

Population, concentrated farm (1934), 99

Vegetation, original, 156

Regions

Northern Michigan

Topography of Upper Peninsula (1912), 119

Counties

Antrim

Forests, extent (1930), 109-C

Bay
 Geomorphology (1905), 119
 Charlevoix
 Physical land types (1940), 73
 Land classification (ca. 1940), 72
 Iron
 Farm-forest types (1930), 109-C
 Land classification (ca. 1940), 72
 Mason
 Land classification (ca. 1940), 72
 Menominee
 Soils and agricultural history (1925), 119
 Midland
 Land classification (ca. 1940), 72
 Monroe
 Geomorphology (1900), 119
 Oceana
 Land classification (ca. 1940), 72
 Ogemaw
 Soils and agricultural history (1923), 119
 St. Joseph
 Land classification (ca. 1940), 72
 Sanilac
 Geology (1897), 119

Minnesota

Erosion survey (1934), 109-D
 Geomorphology (1914-16), 119
 Land use (1947-50), 166
 Migration from (1870-1930), 46
 Natural land cover, 150

Regions

Northern Minnesota
 Drainage in Chippewa lands (ca. 1915), 170

Counties

Carlton
 Land classification (ca. 1940), 72
 Hubbard
 Land use (1930), 109-C
 Scott
 Soils (1941), 73
 Swift
 Soils (1941), 73

Mississippi

Forest types (1934), 109-C
 Geology (ca. 1915), 119

Land use (1947-50), 166
 Migration from (1870-1930), 46
 Problem areas, agricultural (1936), 99
 State-owned land (1934), 99, 109-E

Regions

West-central Mississippi
 Yazoo area: floods, land use, land tenure, tax
 areas, soils, forest conditions (1940), 82;
 population (1930), 48

Counties

See list of 18 county land classification maps (ca. 1940) in entry 72, and six land classification maps covering counties in the Yazoo area (ca. 1940) in entry 82

Covington
 Land classification (1940), 107

Missouri

Erosion (1934-35), 109-D, 160
 Geology (1939), 160
 Land use (1947-50), 166
 Ozark Parkway (1935), 109-C
 Reservoirs, existing and proposed (1940), 184
 Soils (1931), 91

Counties

See list of 15 county land classification maps (ca. 1940) in entry 72

Taney
 Land classification in Pond Fork purchase unit (ca. 1940), 73

Wayne
 Forests, extent (1940), 118

Montana

Geology (1921), 119
 Irrigated areas (ca. 1930), 83; (1936), 241
 Land classification (1930), 109-J
 Land use, recommended (1936), 241
 Migration to (1870-1930), 46
 Minor civil divisions (1940), 35
 Problem areas, agricultural (1936), 241
 Railroad land grants (ca. 1920-27), 149
 Wheat yields, historical, 121

Regions

Northern Montana

Historical climate at Havre, 69

Central Montana

Musselshell River watershed: drainage (ca. 1940), 182

Eastern Montana

Grazing lands (1922), 32

Western Montana

Flathead Indian Reservation, 270

Counties

Carter

Little Beaver Creek watershed: water facilities, land classification, grazing capacity, types of farming (ca. 1940), 183

Chouteau

Crop yields, 109-I

Dawson (northern)

Water facilities, climate, land classification, grazing capacity, location of farms, landownership types, recommended land use (ca. 1940), 183

Fallon

Little Beaver Creek watershed: water facilities, land classification, grazing capacity, types of farming (ca. 1940), 183

Fergus

Land use, land classification, income, farms, tax status, wheat yields (ca. 1936), 104

Planning boundaries, REA lines, grazing districts, schools, roads, quality of land, adjustment areas (1941), 73

Coffee Creek area: landholders, soil, tax delinquency, land use (1938), 73

Jefferson

Pipestone Creek watershed: water facilities, grassland types, landholders (ca. 1940), 183

Missoula

Hydrograph of Clark Fork River (1940), 182

Petroleum

Land use, soils, 109-J

Roosevelt

Land classification (ca. 1940), 72

Big Muddy Creek watershed: land types, cultivated land, grassland types, historical climate (ca. 1940), 182-183

Shotgun-Clover Creek area: water facilities, soils, types of farming (ca. 1940), 183

Sheridan

Big Muddy Creek watershed: land types, cultivated land, grassland types, historical climate (ca. 1940), 182-183

Teton

Planning boundaries, land classification, landownership types, school districts, tax delinquency (ca. 1940), 73

Teton River watershed: water facilities, soils, types of farming (ca. 1940), 183

Valley

Land classification (ca. 1940), 72

Wibaux

Drainage subareas (ca. 1940), 182

Nebraska

Corn and wheat yields, historical, 121

Erosion survey (1934), 109-D

Land use (1947-50), 166

Migration from (1870-1930), 46

Minor civil divisions (1940), 35

Regions

Northwestern Nebraska

Classification of grazing lands (1920), 31

Central Nebraska

Platte Valley: water facilities, irrigation (ca. 1940), 183

East-Central Nebraska

Cedar, Plum, and Beaver Creeks area: irrigation facilities (ca. 1940), 182

Southern Nebraska

Republican River Basin: agricultural conditions, population loss, geology, water facilities (1930-39), 182-183

Western Nebraska

Land classification (1930), 84, 109-J, 186

Niobrara River Basin: water facilities, land use, grassland types (ca. 1940), 183

Counties

Box Butte

Land classification (ca. 1940), 72

Cheyenne

Lodgepole Creek watershed: water facilities, land use, vegetation (ca. 1940), 183

Dawson

Land classification (ca. 1940), 72

- Deuel
 Land use (ca. 1940), 71
 Lodgepole Creek watershed: water facilities, land use, vegetation (ca. 1940), 183
- Harlan
 Land use (ca. 1940), 71
- Morrill
 Land classification (ca. 1940), 72
- Scotts Bluff
 Land use (ca. 1940), 71
- Sheridan
 Land classification (ca. 1940), 72
- Sioux
 Hat Creek watershed: water facilities, land classification (ca. 1940), 183
- Thayer
 Land use (ca. 1940), 71
- Nevada**
- Climate
 Average precipitation (1936), 241
- Erosion (1934), 241
- Flood control investigations (1941), 292
- Geomorphology (1935), 119
- Irrigation
 Irrigated lands (ca. 1922), 114; (1934), 241; (1941), 205
 Potential (1944), 244
- Land use, 240
- Migrant workers (1935-40), 211
- Migration to and from (1870-1930), 46
- Minor civil divisions (1940), 35
- Problem areas, agricultural (1934), 241
- Public lands (1934), 241
- Resettlement areas (1934), 241
- Seasonal movement of sheep (1938-39), 57
- Vegetation (ca. 1922), 114
- Regions
- Northeastern Nevada
 Precipitation (1911-38), 226
- Southern Nevada
 Base map of part of Virgin Valley (1937), 272
- Western Nevada
 Carson River watershed: flood plain, plant cover, landownership types (1942), 293
 Truckee River watershed: landownership types (1942), 293
 Walker River watershed: water facilities, landownership types, land use (ca. 1940), 183
- Counties
- Churchill
 Cornell and Vencillo ranches (1937), 272
 Newlands Reclamation project (ca. 1935), 109-J
- Clark
 Lower Virgin River Valley: irrigated areas, flood areas (ca. 1940), 293
- Eureka
 Residents and mines (1928), 172
- Lander
 Residents and mines (1928), 172
- Lincoln
 Pahranaagat Valley: landholders, soils, water facilities (1936-40), 183, 271
 Virgin River Valley: irrigation, landownership types (ca. 1940), 182
- Mohave
 Lower Virgin River Valley: irrigated areas, flood areas (ca. 1940), 293
- Nye
 Upper White River watershed: water facilities, landownership types (ca. 1940), 183
- Pershing
 Residents and mines (1928), 172
- White Pine
 Steptoe-Spring Valley: water facilities, climate, landownership types (ca. 1940), 183
 Upper White River watershed: water facilities, landownership types (ca. 1940), 183
- New Hampshire**
- Crops and livestock (1935-36), 109-I
- Erosion survey (1934), 109-D
- Land use (1947-50), 166
- Regions
- Southern New Hampshire
 Forest types (1906), 119
- Counties
- Belknap
 Roads (ca. 1940), 73
 Land classification (ca. 1940), 72
- Carroll
 Land use (ca. 1940), 71
- Coos
 Land classification (ca. 1940), 72
- Sullivan
 Land use (ca. 1940), 71

New Jersey

Drainage basins (1900), 119
 Erosion survey (1934), 109-D
 Forests, extent (1900), 119
 Geology (1921), 119
 Land use (1947-50), 166
 Minor civil divisions (1940), 35

Counties

Atlantic, Burlington, Cape May, and Gloucester:
 types of farms (ca. 1940), 73

New Mexico**Irrigation**

Irrigated lands (ca. 1930), 83
 Projects (1934), 241
 Land use (1947-50), 166; 151, 159
 Migration from (1870-1930), 46
 Overgrazed areas (1934), 241
 Problem areas, agricultural (1934), 241
 Public lands (1934), 241
 Railroad land grants
 Atlantic and Pacific, 151
 Vegetation, 151

Regions**Northwestern New Mexico**

Upper Colorado River Basin: damsites, reservoirs,
 irrigation facilities, arable lands (1938), 289

Southeastern New Mexico

Mines, ranches, roads, elevations (1943), 159
 Pump irrigation, land use (ca. 1948), 169

Counties**Bernalillo**

Graham-MacDonald tract (1936), 273
 Placitas area: landownership types, irrigation
 (1941), 182

Chaves

Mines, ranches, roads, schools, refineries (1943),
 159
 Distance to market, climate, physiography, geol-
 ogy, water resources, capacity of wells (ca.
 1940), 183

Colfax

Ocate Creek watershed: climate, hydrograph,
 water facilities (ca. 1940), 183

De Baca (southern)

Mines, ranches, roads, schools, refineries (1943),
 159

Eddy

Mines, ranches, roads, schools, refineries (1943),
 159
 Distance to market, climate, physiography, geol-
 ogy, water resources, capacity of wells (ca.
 1940), 183

Lea

Mines, ranches, roads, schools, refineries (1943),
 159
 Shallow water district: water facilities, land use
 (ca. 1940), 183

Mora

Mora River watershed: water facilities, land use,
 landownership types (ca. 1940), 183
 Ocate Creek watershed: water facilities, climate,
 hydrograph (ca. 1940), 183

Otero

Lower Tularosa watershed: base map (1941), 182

Quay

Water facilities, geology, irrigation costs, Umbarger
 Reservoir drainage area, Newkirk-Pajarito
 Reservoir (ca. 1940), 183

Rio Arriba

Santa Cruz watershed: land use, landownership
 types, water facilities, map of Cordova (ca.
 1940), 183

Roosevelt (southern)

Mines, ranches, roads, schools, refineries (1943),
 159

San Juan

Irrigation ditch (1941), 182
 Hammond, Inc. project: land classification, land-
 ownership (ca. 1940), 183

San Miguel

Mora River watershed: water facilities, land use,
 landownership types (ca. 1940), 183
 Trujillo area: landownership types, irrigation
 (1941), 182

Sandoval

Placitas area: landownership types, irrigation
 (1941), 182
 Upper Rio Puerco watershed: water facilities,
 geology (ca. 1940), 183

Santa Fe

Crops and livestock (1930), 273
 Santa Cruz watershed: landownership types, land
 use (ca. 1940), 183

Sierra

Alamoso-Rio Cuchillo area: water facilities, land use, landownership types (ca. 1940), 183

Socorro

Alamoso-Rio Cuchillo area: water facilities, land use, landownership types (ca. 1940), 183

Taos

Sangre De Cristo grant: water facilities, historical growing seasons, land use (ca. 1940), 183

Union

Rita Blanca drainage basin: water facilities, land use and quality, recommended farming (ca. 1940), 183

Valencia

Water facilities, landownership types, land use (ca. 1940), 183

New York

Erosion survey (1934), 109-D

Geology (1895), 119

Geomorphology (1905), 119

Land use (1947-50), 166

Limestone, distribution (1902), 119

Minerals, economic deposits (1904), 119

Regions**Southwestern New York**

Land classification (ca. 1940), 72

Counties

Chemung, Rensselaer, Schuyler, and Wyoming: land classification (ca. 1940), 72

North Carolina

See also Eastern United States, Appalachian States

Cleared land, 118

Crop yields (1935), 109-D

Drainage and wetlands (1945), 170

Erosion survey (1934), 109-D

Land use (1947-50), 166

Regions**Eastern North Carolina**

Albemarle Pamlico Peninsula: land classification (1936-37), 110

Dismal Swamp: drainage (1916), 170

"Carolina Bays," 169

Western North Carolina

Submarginal lands proposed for Great Smoky Mountains National Park (ca. 1931), 103

Counties**Caswell**

Land classification, Negro and white population distribution (ca. 1940), 72

North Dakota**Climate**

Influence of weather on crop yields (ca. 1931), 69

Erosion survey (1934), 109-D

Income and expenditures, farm survey (ca. 1940), 45

Land, arable, by county (1922), 32

Land under cultivation (1935), 94

Land use (1947-50), 166

Migration to (1870-1930), 46

Soil regions (1909), 119; (1941), 58

Wheat yields, historical, 121

Regions**Western North Dakota**

Land classification (1930), 84, 109-J, 186

Grazing lands (1922), 32

Southwestern North Dakota

Cedar River watershed: damsites (ca. 1940), 183

Counties**Billings**

Heart River Basin: water facilities, land types, land use, tax status, public facilities, recommended farming (ca. 1940), 182-183

Bowman

Land classification (ca. 1940), 72

Burke

Land use, tax status, farms, croplands, public assistance (1938), 95

Land classification (ca. 1940), 72

Burleigh

Cultivated land (1938), 95

Land classification (ca. 1940), 72

Hettinger

Upper Cannonball River area: extent of cropland (1933), 182

McKenzie

Land classification (ca. 1940), 72

Land use (ca. 1940), 71

McKenzie area: water facilities, climate, land classification, land use, public facilities (ca. 1940), 183

Pierce

Land classification (ca. 1940), 72

Land use (ca. 1940), 71

Renville

Land classification (ca. 1940), 72

Land use (ca. 1940), 71

Rollette

Land classification (ca. 1940), 72

Land use (ca. 1940), 71

Sargent

Land classification (ca. 1940), 72

Land use (ca. 1940), 71

Landownership types, land use, tax status, soils, operating units, croplands (1938), 95

Sheridan

Land classification (ca. 1940), 72

Land use (ca. 1940), 71

Slope

Upper Cannonball River area: extent of cropland (1933), 182

Stark

Heart River Basin: water facilities, land types, land use, tax status, public facilities, recommended farming (ca. 1940), 182, 183

Towner

Land classification (ca. 1940), 72

Land use (ca. 1940), 71

Ward

Land classification (ca. 1940), 72

Williams

Little Muddy watershed: water facilities, land use, recommended farming, farmsteads, soils, erosion (ca. 1940), 183

Ohio

Erosion survey (1934), 109-D

Geology (1909), 119

Land use (1947-50), 166

Township boundaries (1935), 35

Counties*See also* list of 20 county land classification maps (ca. 1940) in entry 72

Clark

Land use (ca. 1940), 71

Clermont

Land classification (ca. 1940), 73

Hancock

Soils, quality (ca. 1940), 73

Hocking

Land use (ca. 1940), 71

Meigs

Coal and salt mines, oil and gas wells, submarginal land (ca. 1940), 73

Morrow

Land use (ca. 1940), 71

Noble

Land use (ca. 1940), 71

Paulding

Land use (ca. 1940), 71

Pickaway

Land use (ca. 1940), 71

Seneca

Land use (ca. 1940), 71

Wyandot

Land use (ca. 1940), 71

Oklahoma

Forests

Extent in Indian Territory (1899), 118

Types (1940), 160

Landownership types (1939), 119

Land use (1947-50), 166

Minerals, influence on land (ca. 1942), 113

Physiographic regions (1912), 160

Soils, 160

Wheat yields, historical, 121

Counties

Beaver

S.D.R. & I. Co. lands: landholders, land types, geology, water facilities (ca. 1940), 183

Cimarron

Canadian River Basin: water facilities, geology, types of farming (ca. 1940), 183

Dry Cimarron Basin: water facilities (ca. 1940) 183

Harper

S.D.R. & I Co. lands: landholders, land types, geology, water facilities (ca. 1940), 183

Okfuskee

Land classification (ca. 1940), 72

Texas

Canadian River Basin: water facilities, geology, types of farming (ca. 1940), 183

Oregon

- Age composition of population (1930-60), 209
- Farms, types (1935), 220
- Income and expenditures, farm survey (ca. 1940), 213
- Irrigation
 - Irrigated lands (ca. 1930), 83
 - Projects (ca. 1943), 194
 - Existing and potential (1936-38), 274
- Japanese-Americans in (1940), 235
- Land use (1935), 220
- Migrant workers (1935-40), 211
- Migration to and from (1870-1930), 46
- Minor civil divisions (1940), 35
- Railroad land grants (1904), 149
- Reservoirs, by area (1937-38), 274
- Seasonal movement of sheep (1938-39), 57
- Settlement
 - New farms (1930-36), 241
 - Opportunities (1944-46), 194
- Towns and settlements (1904), 149
- Water facilities, by area (1937-38), 274

Regions

Eastern Oregon

- Historical climate in Harney Basin, 69

Counties

Baker

- Burnt River watershed: land and water use (ca. 1940), 183

Benton

- Land use, land tenure, types of crops (1939-40), 276
- Isolated farm areas (1940), 49

Clatsop

- Land classification (ca. 1940), 72

Coos

- Land use (1936), 275
- Migration to (1930-39), 210

Gilliam

- Land classification (ca. 1940), 72

Jackson

- Water use, reservoir sites (1939), 290

Jefferson

- Trout Creek watershed: land and water use (ca. 1940), 183

Josephine

- Schools, land use, value of land, crops grown, historical uses of taxes (1936-38), 277
- Water use, reservoir sites (1939), 290
- Soils and vegetation (1937-40), 242
- Applegate River watershed: water facilities (ca. 1940), 183

Lake

- Goose Lake watershed: water facilities, climate, irrigable land, water-right lands (ca. 1940), 183

Lincoln

- Isolated farms (1940), 49

Maltheur

- Owyhee irrigation project: landholders (1935-37), 223

Multnomah

- Portland rural-urban fringe (1941), 117

Polk

- Yamhill River watershed: water facilities (ca. 1940), 183

Umatilla

- Canning peas, acreage (1942), 278

Union

- Powder River watershed: water facilities, landholders (ca. 1940), 183

Yamhill

- Yamhill River watershed: water facilities (ca. 1940), 183

Pennsylvania

- Erosion survey (1934), 109-D

- Land use (1947-50), 166

- Migration from, and of Negroes to (1870-1930), 46

- Minor civil divisions (1940), 35

Rhode Island

- Erosion survey (1934), 109-D

- Land use (1947-50), 166

- Migration from (1870-1930), 46

Counties

Bristol

- Land use (ca. 1940), 71

- Bristol, Kent, Providence, Washington: land classification (ca. 1940), 72

South Carolina

Erosion survey (1934), 109-D
 Geology (1893), 119
 Land classification (ca. 1936), 109-J
 Land use (1947-50), 166
 Migration to and from (1870-1930), 46

Regions

Southern South Carolina

Topography of Savannah River watershed (1939),
 191

Counties

Sumter

Poinsett Forest project: land classification (ca.
 1940), 109-J

South Dakota

Climate

Precipitation (ca. 1940), 183
 Corn and wheat yields, historical, 121
 Erosion survey (1934), 109-D
 Geology (1932), 119
 Ground water (ca. 1940), 183
 Irrigation facilities (ca. 1940), 183
 Land use (ca. 1940), 183; (1947-50), 166
 Migration to (1870-1930), 46
 Water resources (ca. 1940), 183

Regions

East Central South Dakota

Crow Creek watershed: water facilities, land clas-
 sification, grazing capacity, types of farming,
 landownership types (ca. 1940), 183

Western South Dakota

Grazing lands (1922), 32
 Land classification (1930), 84, 109-J, 186

Counties

Hand

Socioeconomic areas, schools, ethnic groups, roads
 (1940), 96

Lawrence

Bear Butte, Elk, and Box Elder Creeks area: water
 facilities, ground water (ca. 1940), 183

Marshall

Land classification (ca. 1940), 72
 Landownership types (1939), 73

Meade

Cherry-Sulphur Creek area: water facilities, land
 types, grazing capacity, public lands, land
 use, tax status (ca. 1940), 183

Perkins

Rabbit and Thunder Creeks watershed: water
 facilities, land use, geology (ca. 1940), 183
 White Butte-Bison area: land classification, aban-
 doned farms, schools, churches, recom-
 mended crops (1936-37), 105

Remington

Bear Butte, Elk, and Box Elder Creeks area: water
 facilities, ground water (ca. 1940), 183

Sanborn

Land classification (ca. 1940), 72

Tripp

Landownership types, land use, and soils (ca.
 1940), 73
 Land classification (ca. 1940), 72

Union

Land classification (ca. 1940), 72

Tennessee

See also Eastern United States, Appalachian States
 Erosion survey (1934), 109-D
 Geology (1915), 119
 Land use (1947-50), 166

Regions

Eastern Tennessee

Submarginal lands proposed for Great Smoky
 Mountains National Park (ca. 1931) 103

Counties

Bledsoe

Land classification (ca. 1940), 72
 Land use in part of county (1936), 108

Claiborne

Land classification (ca. 1940), 72

Coffee

Land classification (ca. 1940), 72

Cumberland

Planning boundaries (ca. 1940), 73
 Land use in part of county (1936), 108

Hamilton

Land use in part of county (1936), 108

Humphreys

Land classification (ca. 1940), 72

Meigs

Land classification, forest cover (1936-37), 110

Land use in part of county (1936), 108

Rhea

Land use, trade areas, soil conditions (1936), 108

Roane

Planning boundaries (ca. 1940), 73

Land classification (ca. 1940), 72

Land use in part of county (1936), 108

Texas

Erosion survey (1934), 109-D

Land use (1947-50), 166

Migration to and from (1870-1930), 46

Minor civil divisions (1940), 35

Problem areas, agricultural (1935-39), 99

Regions

Northern Texas

Paloduro Basin: drainage (1938), 182

Rita Blanca and Major Long's Creeks: drainage (1937), 182

Eastern Texas

Artesian areas (1942), 185

Southeastern

San Jacinto watershed: land use, soils, landholders (1941), 116

Western Texas

Llano Estacado area: land use, pump irrigation, water facilities (1947-57), 169, 172, 183

Counties

Bailey

Hydrology at Muleshoe (ca. 1940), 182

Callahan

Central Colorado River watershed: water facilities, flood frequency, dwellings, geology (ca. 1940), 183

Coleman

Drainage, roads, dam profiles (1939), 182

Central Colorado River watershed: water facilities, flood frequency, dwellings, geology (ca. 1940), 183

Dallam

Rita Blanca drainage basin: water facilities, land quality, land use, recommended farming, ground water (ca. 1940), 183

Mitchell

Champion Creek watershed: drainage (ca. 1940), 182

McCulloch

Brady area: drainage, roads (1939), 182

Nolan

Champion Creek watershed: drainage (ca. 1940), 182

Ochiltree

Wolf Creek watershed: drainage (ca. 1940), 182

Reeves

- Toyah Creek area: water facilities, recommended land use, geology (ca. 1940), 183

Randall

Water resources, proposed Umbarger Dam and Reservoir (ca. 1940), 182-183

Deaf Smith

Umbarger Reservoir (ca. 1940), 183

San Saba

Land classification (ca. 1940), 72

Wise

Land classification (ca. 1936), 109-C

Utah

Erosion (ca. 1935), 241

Drainage basins (1943-44), 287

Dry farming areas (1939), 288; (1946), 85

Grazing

Ungrazed areas (ca. 1935), 241

Hydroelectric plants (1939), 288

Irrigation

Facilities (1939), 288

Irrigated lands (ca. 1930), 83; (ca. 1935), 241; (1939), 288; (ca. 1942), 243; (1946), 85

Land use (1934), 85; (1947-50), 166; 240

Migration to and from (1870-1930), 46

Problem areas, agricultural (ca. 1935), 241

Recreational lands (1934), 241

Reservoirs, proposed (1939), 288

Resource areas (1946), 85

Seasonal movement of sheep (1938-39), 57

Vegetation (1934), 85

Water supply areas (1943-44), 287

Regions

Northern Utah

Historical levels of Great Salt Lake, 149

Weber River watershed: irrigation facilities, dry farmland (1939), 288

Bear River watershed: irrigation facilities, dry farmland (1939), 288

Eastern Utah

Upper Colorado River Basin: damsites, reservoirs, irrigation, arable lands (1938), 289

Central Utah

Sevier River watershed: irrigation facilities, dry farmland (1939), 288

Southwestern Utah

Sevier Lake watershed: subareas (1939), 293

Virgin River watershed: irrigation facilities, dry farmland (1939), 288

Counties

Carbon

Landownership types, 280

Duchesne

Uinta Basin: vegetation, 279

Emery

Upper Muddy River watershed: water facilities, irrigated lands (ca. 1940), 183

Grand

Little Dolores River watershed: water facilities, climate (ca. 1940), 183

Iron

Newcastle area: landholders (1941), 281

Juab

Nebo area: water facilities, climate, land use, ground water, irrigable lands (ca. 1940), 183

Millard

Delta area of Lower Sevier River watershed: water facilities, irrigated lands, landownership types, land classification (ca. 1940), 183, 291

Pahvant area: water facilities, climate, land use (ca. 1940), 183

Sanpete

Sanpete area: water facilities, land use, climate, vegetation (ca. 1940), 183

Willow Creek watershed: water facilities, irrigated lands (ca. 1940), 183

Sevier

Upper Muddy River watershed: water facilities, irrigated lands (ca. 1940), 183

Willow Creek watershed: water facilities, irrigated lands (ca. 1940), 183

Tooele

Erda area: ground water (ca. 1940), 183

Uintah

Ashley Valley: water facilities, precipitation, irrigated lands (ca. 1940), 183

Uinta Basin: vegetation, 279

Utah

Nebo area: water facilities, climate, land use, ground water, irrigable lands (ca. 1940), 183

Washington

Upper Virgin River watershed: water facilities, climate, land use, hydrograph (ca. 1940), 183

Vermont

Erosion survey (1934), 109-D

Land classification (ca. 1940), 72

Land use (1947-50), 166

Migration from (1870-1930), 46

Minor civil divisions (1940), 35

Counties

See list of 14 county land classification maps (ca. 1940) in entry 72

Virginia

See also Eastern United States, Appalachian States

Farm drainage plans, acreage (1920-22), 170

Geology (1928), 119

Land use (1947-50), 166

Township boundaries (1920), 35

Counties

Culpeper

Land classification (ca. 1940), 72

Montgomery

Land classification (1936), 109-J

Washington

Age composition of population (1930-60), 209

Crop yields (1929-32), 109-I

Erosion (1934-35), 241

Geology (1936), 119

Grazing

Overgrazed areas (1934-35), 241

Income and expenditures, farm survey (ca. 1940), 213

Irrigated lands (1933), 85, 206

Japanese-Americans in (1940), 235

Land classification (ca. 1940), 72

Land use (1933), 85, 206

Land utilization program, proposed projects (1935), 241

Migration to and from (1870-1930), 46
 Minor civil divisions (1940), 35
 Problem areas, agricultural (1934-35), 241
 Public lands (1935), 241
 Settlement, areas available for (1934-35), 241

Regions

Eastern Washington

Columbia Basin project: irrigation, types of farming, land classification by quality, inquiries about settlement, proposed trade areas (1939-40), 207

Counties

Clark

Dwellings, value of land, landownership types, land use, quality of soil (1937-38), 285
 Soils and vegetation (1937-40), 242
 Yacolt area (n.d.), 227

Douglas

Land classification (ca. 1940), 72

Garfield

Farms, landholders (1937-38), 282

Grant

Farms, landholders (1937-38), 282

Grays Harbor

Landownership types (1936), 284

Island

Farms, landholders (1937-38), 282

King

Seattle area: land classification, forest cover (1897), 1

Klickitat

Land classification (ca. 1940), 72

Pierce

Land classification (ca. 1940), 72
 Tacoma area: land classification, forest cover (1897), 1

Pend Oreille

Landownership types (1933), 109-E

Skamania

Land classification (ca. 1940), 72

Snohomish

Land classification (ca. 1940), 72
 Schools, roads (1936), 283
 Getchell area, 228

Spokane

Landownership types, land use, soil quality, tax delinquency, Federal bank loans (ca. 1939), 97

Landownership types (1933), 109-E

Land classification (ca. 1940), 72

Stevens

Landownership types (1933), 109-E

Thurston

Migration to (1930-39), 210

Land classification (ca. 1940), 72

Walla Walla

Canning peas, acreage (1942), 278

Yakima

Tieton Irrigation District: irrigation, land tenure, crops (ca. 1937), 61, 222

West Virginia

See also Eastern United States, Appalachian States

Erosion survey (1934), 109-D

Forests, virgin and cutover (1910), 119

Land use (1947-50), 166

Minor civil divisions (1940), 35

Counties

Barbour

Land classification (ca. 1940), 72

Berkeley

Land classification (ca. 1940), 72

Braxton

Frametown area: land use, farm buildings, slope (ca. 1940), 40

Lewis

Land classification (ca. 1940), 72

Soils, erosion, and slope (ca. 1940), 73

Pocohontas

Land classification (ca. 1940), 72

Ritchie

Land classification (ca. 1940), 72

Wood

Land classification (ca. 1940), 72

Wisconsin

Erosion survey (1934), 109-D

Ethnic population (1940), 47

Forests, types (1927), 118

Geology (1876), 119

Geomorphology (1910), 119

Land use (1947-50), 166

Soils (1876 and 1918), 119

Settlements and cultural features (1876), 119

Township boundaries (1940), 47

Vegetation (1876), 119; (1927), 118; 150

Regions

Northern Wisconsin

Rural zoning (ca. 1940), 115

Counties

Bayfield

Zoning districts (ca. 1940), 115

Door

Land classification (ca. 1940), 72

Milwaukee

Parks (ca. 1940), 115

Wyoming

Geology (1920), 119

Irrigated lands (ca. 1930), 83

Land classification (1930), 109-J

Land use (1947-50), 166

Minor civil divisions (1940), 35

Regions

Northern Wyoming

Powder River watershed: ranches, drainage (ca. 1940), 182

Southwestern Wyoming

Upper Colorado River Basin: damsites, reservoirs, irrigation, arable lands (1938), 289

Counties

Big Horn

Nowood Creek watershed: land types, landownership types, vegetation, grazing capacity, ground water, water facilities (ca. 1940), 183

Fremont

Popo Agie drainage basin: water facilities, geology, soils, reservoir sites (ca. 1940), 183

Johnson

Crazy Woman Creek watershed: water facilities, climate, land use, vegetation, landownership types (ca. 1940), 183

Laramie

Crow Creek watershed: wells and farms in Carpenter area (ca. 1940), 183

Lodgepole Creek watershed: water facilities, ground water, land types, vegetation, land use (ca. 1940), 183

Lincoln

Salt River watershed: water facilities, land types, land use, grassland types, landownership types (ca. 1940), 183

Niobrara

Niobrara River watershed: water facilities, land use, ground water, grassland types (ca. 1940), 183

Platte

Landownership types (1939), 73

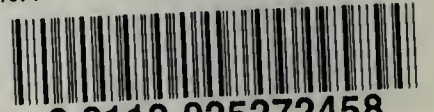
Sublette

Upper Green River: drainage (ca. 1940), 182

Washakie

Nowood Creek watershed: land and landownership types, vegetation, grazing capacity, ground water, water facilities (ca. 1940), 183

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